

Champion

CHAMPION BLOWER AND FORGE CO.
LANCASTER, PA., U.S.A.

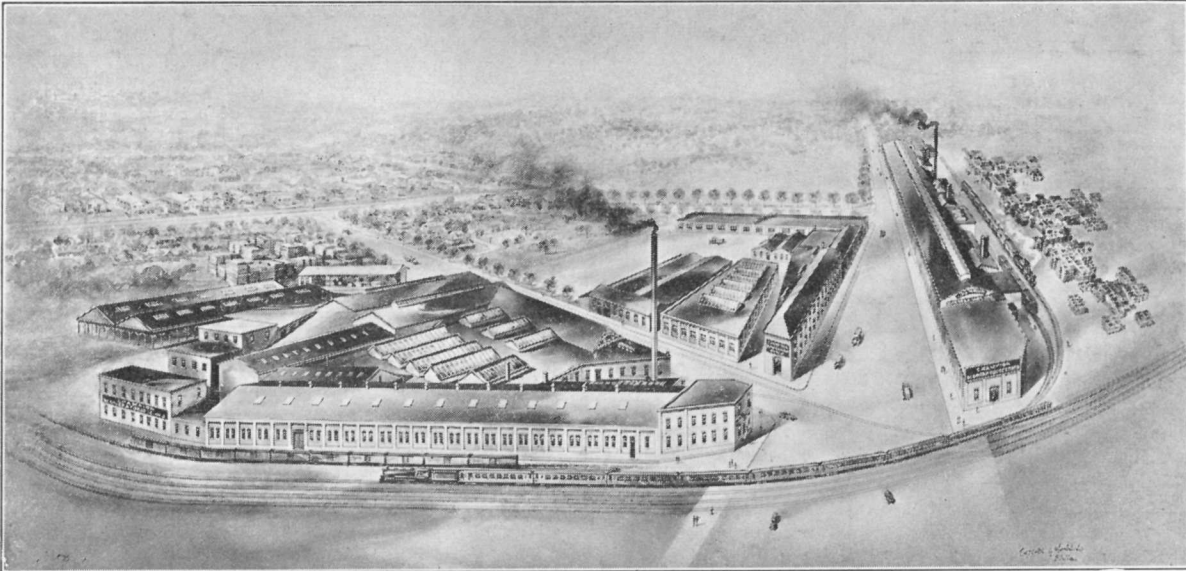
FOUNDED
1875

C. B. LONG, President
O. H. HERTZLER, Vice-President
H. C. GIBNEY, Asst. Secretary

H. K. LONG, Treasurer
C. B. FLICK, Secretary

INCORPORATED
1887

CATALOGUE No. 80



GENERAL CATALOGUE OF
"Champion"

| | | | |
|--------------|---|-----------------|--------------|
| Blowers | Saw Mandrels | Arbor Presses | Tire |
| Forges | Grinders | Screw Plates | Shrinkers |
| Tuyere Irons | Buffers | Taps | Tire Benders |
| Forge Shop | Polishers | Dies | Power |
| Drills | Exhaust Fans | Tap Wrenches | Hammers |
| Vises | Mine Fans | Charcoal Grills | Punches |
| Power Hack | Fans for Heating, Cooling, Ventilating, | | Shears |
| Saw Machines | Drying and Mechanical Draft | | |

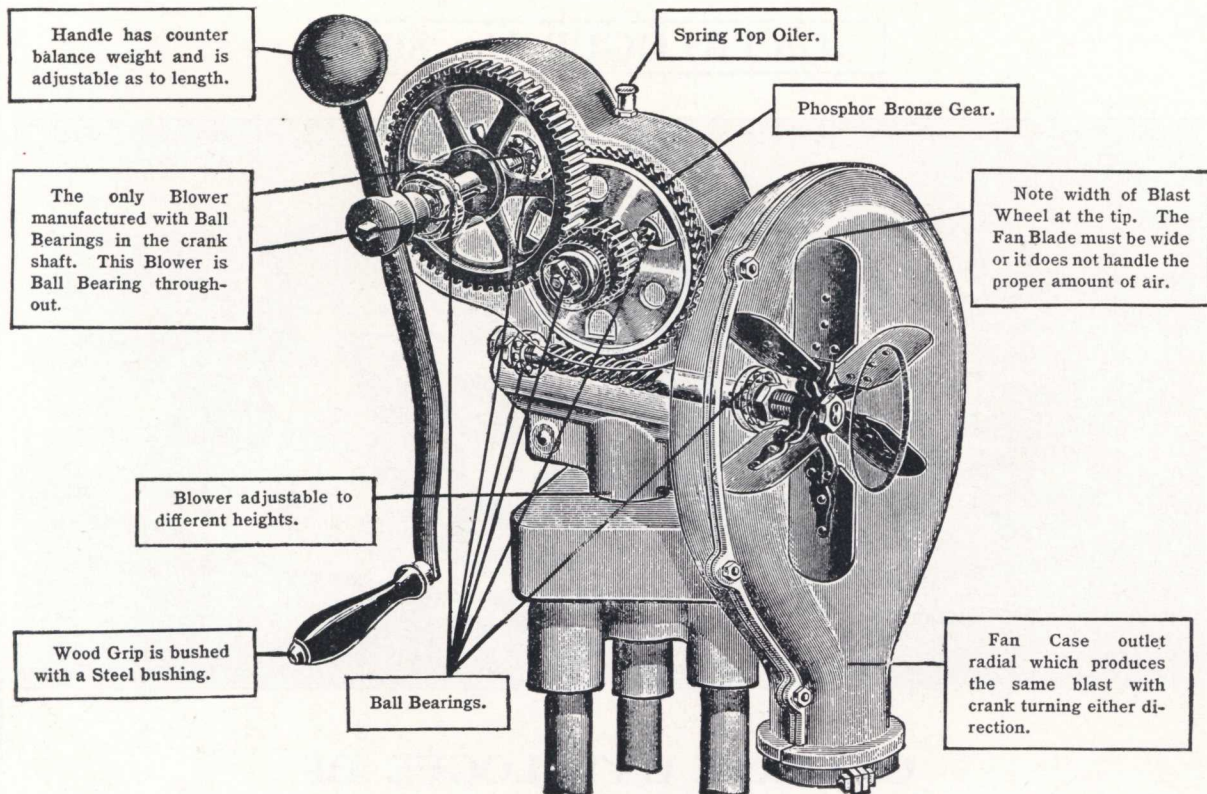
MANUFACTURED BY

The Champion Blower & Forge Company
Lancaster, Pa., U. S. A.

CABLE ADDRESS—"CHAMPION LANCASTER" (PENNSYLVANIA)



THE 400 CHAMPION "PATENTED" HIGH-SPEED SPIRAL GEARING SHOWN IN DETAIL



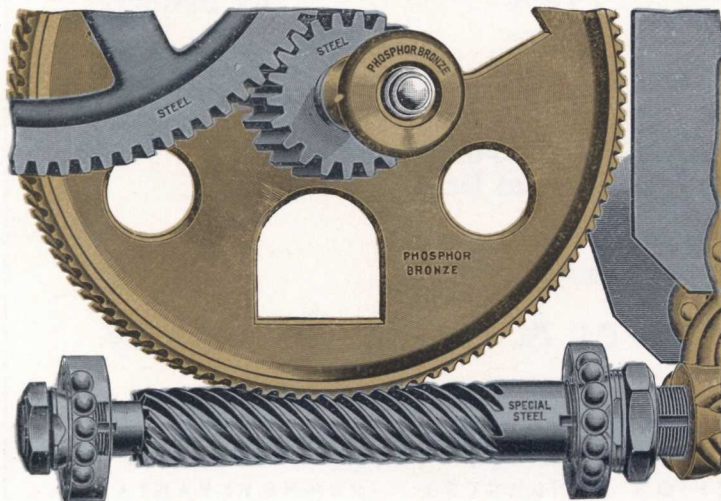
The 400 Champion "Patented" High-Speed Spiral Gearing in transparent cut shows the machinery in detail as every part is fitted up when in working order.

This transparent cut, in connection with the gearing cut, shows the inner workings of the "Famous 400" Gearing, so that the inexperienced can understand and appreciate its high grade construction.

The Fan Case is pear-shaped with outlet radial which produces the same blast with the crank turning either direction.

Each Turn of the Crank produces 46 complete Revolutions of the Blast Wheel. All Blower Speeds should be counted before purchasing, as high speed of the Fan Wing can only make a High Pressure White Heat Blast.

The blades on the blast wheel are not tapered or narrow, but are the same width at the tip of the blade as at the hub, therefore must throw a larger volume of air than a tapered blade. This wide blade gives the operator full benefit of the blast from every revolution of the crank and with the high-speed spiral gearing produces a white heat pressure blast, equal to a blower run by power.



All this means that the Champion 400 Blower, with 12" fan case and with wide blade blast wheel, produces more volume at a higher pressure than any other 16" hand blower with narrow or tapered blade.

The 400 Champion "Patented" High-Speed Spiral Gearing has been manufactured by us for many years and is in use on over a million Champion Steel Blowers and Forges, distributed in every section of the globe.

The 400 Spiral Shaft with Fan Wing attached is the only piece of the entire gearing that runs at high speed.

Every piece in the High-Speed Spiral Gearing is built large, powerful and substantial. Fully equal to ten times the high speed required to run a Blower.

The 6-inch Special Phosphor Bronze Spiral Gear and the Tool Steel Spiral Shaft are the same size in diameter and teeth used on Spirals running at 20,000 revolutions per minute, carrying heavy loads.

The 400 Champion Concaved Spiral Gear, riding the Spiral Shaft lengthwise, meshes eight (8) full teeth continuously, which forever makes lost motion or noise impossible.

The 400 Champion Ball Bearings are all adjustable with cups and cones lathe-turned from the solid tool steel bar and hardened like glass, then ground and polished to the finish of a mirror, thus making the most perfect and durable High-Speed Adjustable Bearing that can be manufactured.



THE FAMOUS 400 CHAMPION BLOWER
The Original Cut Gear Hand Blower, with Over a Million in Use
This Is the Blower that Has Revolutionized the World's Hand Blacksmiths' Fires and Made Them a Most Profitable Business

The Famous 400 Champion Blowers and Forges, after many years of work with over a million in use, unquestionably stand in a class of their own.

The users are their staunchest supporters and it is our desire that those who are not familiar with their value ask what the Owners Say, and particularly those who have used them many years, as it is the only blower as good after many years' use as when new.

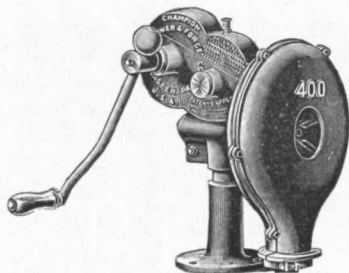
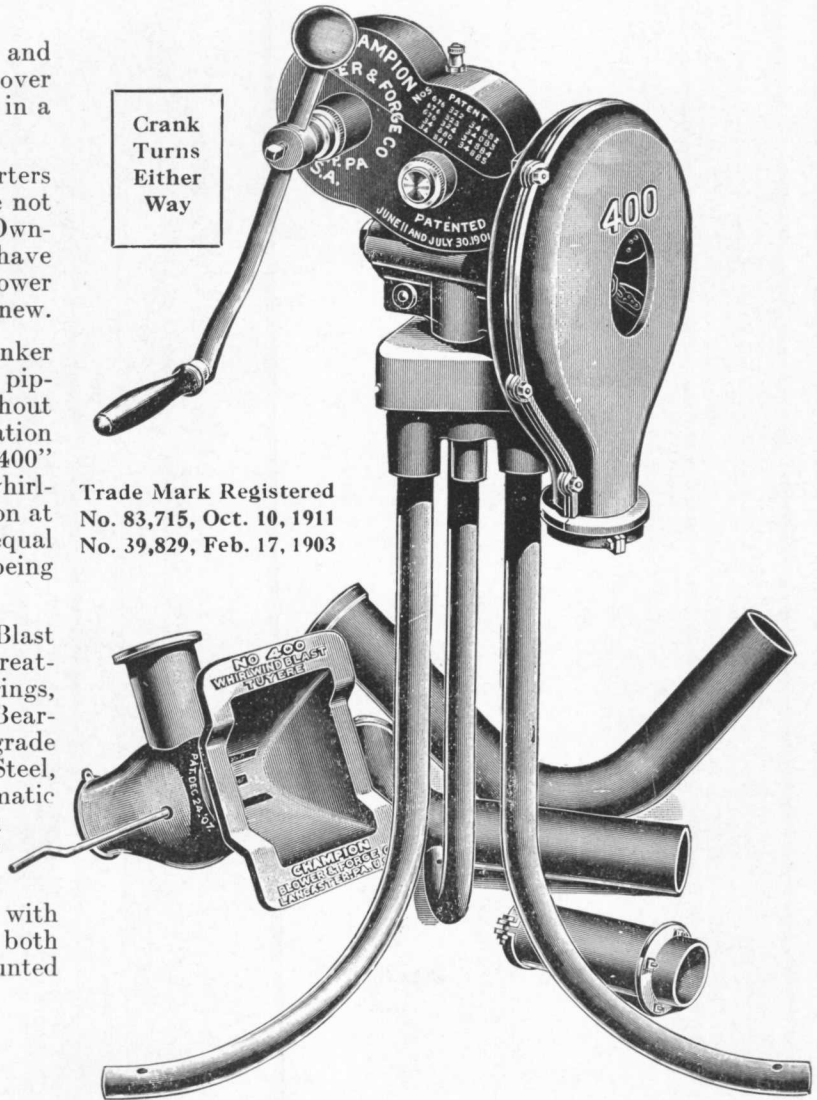
The 400 "Whirlwind" Blast Anti-Clinker Heavy Nest Tuyere Iron and complete piping is furnished with the 400 Blower without extra charge. This Tuyere, in combination with the high speed of the "Famous 400" Blower, produces a circular, rotary, "whirlwind," white heat blast which heats iron at least one-third quicker and with an equal saving in coal, as no heat is wasted by being blown up the chimney.

The 400 Blower and "Whirlwind" Blast Tuyere represents in every respect the greatest value in a Blast Producer. Its Gearings, in connection with the Adjustable Ball Bearings, are constructed from the highest grade of Special Phosphor Bronze and Tool Steel, turned and finished with special Automatic Machinery, thus making the Blower run in the most accurate and smooth manner that can be constructed by human hands.

The 400 Blower can be supplied with 6 x 1-inch tight and loose pulley for both hand and power drive, or can be mounted on a short pedestal for bench use.

Crank
Turns
Either
Way

Trade Mark Registered
 No. 83,715, Oct. 10, 1911
 No. 39,829, Feb. 17, 1903



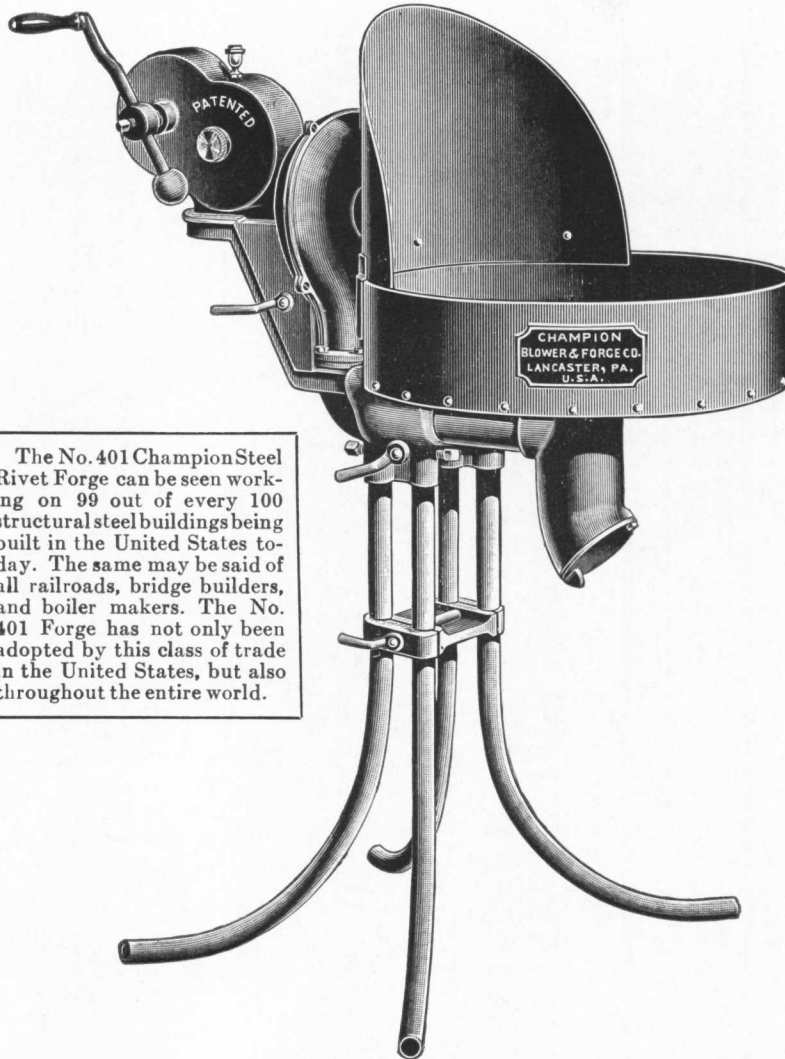
No. 400 Bench

| No. | Fan | Weight | Code |
|-----------|-----|----------|---------|
| 400 Stand | 12" | 160 lbs. | Facanea |
| 400 Bench | 12" | 145 lbs. | Fag |

Champion Steel Blacksmith Blower is made for either right- or left-hand fires. Right-hand Blowers always furnished unless otherwise specified.



CHAMPION STEEL RIVET FORGES
The Original Ball Bearing Rivet Forge
Made with Adjustable Ball Bearings Only



The No. 401 Champion Steel Rivet Forge can be seen working on 99 out of every 100 structural steel buildings being built in the United States today. The same may be said of all railroads, bridge builders, and boiler makers. The No. 401 Forge has not only been adopted by this class of trade in the United States, but also throughout the entire world.

No. 401

Champion Steel Rivet Forges have been on the market for many years and are used by the great majority of Railroads, Bridge Builders, Boiler and Structural Iron Workers of the world, also very desirable for garages. Nothing was ever seen to even approach them for a strong positive blast. We can guarantee them to increase the work over and above any other make of Rivet Forge 25%. Their Gearing is the "Famous 400" Champion "Patented" High Speed Spiral Gearing. They run noiseless, and can be taken apart for transportation, and again set up in a few minutes. They will produce blasts to weld 3½- to 4-inch iron in ten minutes. No. 401 Steel Rivet Forge is used on 99 out of 100 Structural Steel Buildings constructed. Crank Turns either way to make the blast. Each Turn of the crank produces 46 complete Revolutions of the Fan Wing.

| No. | Hearth | Fan | Height | Weight | Code |
|------|--------|-----|--------|----------|-----------|
| 401 | 18" | 9" | 30" | 135 lbs. | Facanhoso |
| 401½ | 22" | 9" | 30" | 145 lbs. | Facoti |
| 401¾ | 24" | 12" | 30" | 150 lbs. | Facturada |

With Half Hood—Full or Closed Hood, extra

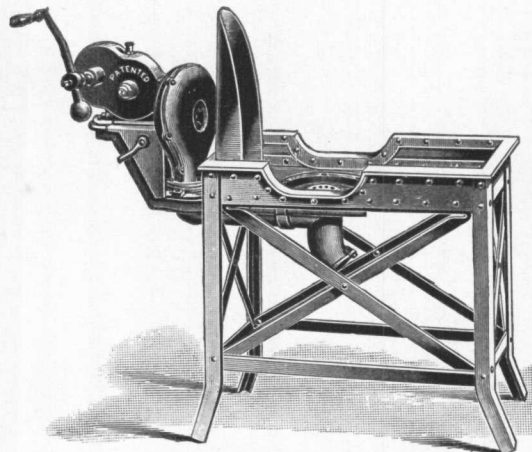


CHAMPION STEEL RIVET TOOLMAKERS' AND BOILERMAKERS' FORGES

Made with Adjustable Ball Bearings Only

Size of Hearth, 24 x 24 Inches
Size of Hearth, 30 x 30 x 6 Inches
Size of Hearth, 24 x 30 x 6 Inches

Fan, 9 Inches in Diameter
Fan, 12 Inches in Diameter
Fan, 12 Inches in Diameter



No. 404 with Shield

| No. | Hearth | Fan | Wind Shield | Height | Weight | Code |
|---------|--------------|-----|-------------|--------|----------|------------|
| 404 | 24 x 24" | 9" | Wind Shield | 30" | 160 lbs. | Facheabais |
| 405 | 24 x 24" | 9" | Half Hood | 30" | 175 lbs. | Fachendon |
| 406 | 30 x 30 x 6" | 12" | Wind Shield | 30" | 270 lbs. | Fachons |
| 406 1/2 | 24 x 30 x 6" | 12" | Wind Shield | 30" | 265 lbs. | Freckled |
| 407 | 30 x 30 x 6" | 12" | Half Hood | 30" | 280 lbs. | Fachplatte |
| 407 1/2 | 24 x 30 x 6" | 12" | Half Hood | 30" | 275 lbs. | Frechsten |

With water tank, extra

Champion Steel Forges are made of heavy steel with legs welded to the Hearth and thoroughly braced, making it a stiff and powerful forge large enough in Blast for most any work.

Hearth is formed from a single sheet of No. 10 gauge steel plate with edges reinforced with 3/4-inch angle iron, making it seamless—therefore, rust proof and indestructible.

The Blower and all machinery can be taken off for transportation.

For further information as to the construction of machinery refer to pages 2 and 3.

Crank turns either way to make blast.

Each turn of the crank produces 46 complete revolutions of the Fan Wing.

It is especially adapted for Horseshoers, Garages, Toolmakers, Jewelers, Bicycle Repairers, Tempering Tools, Tank Builders, Miners, Prospectors, making repairs on Boilers, Oil Field Work, Steam and Elevated Railroads.

CHAMPION STEEL BLACKSMITHS' FORGES

Made with Adjustable Ball Bearings Only

Nos. 408, 409, 407 and 407 1/2 Champion Steel Blacksmiths' Forges represent the "Famous 400" Champion Steel Blower shown on pages 2 and 3, converted into a most complete and practical Blacksmiths' Forge.

These Forges have been universally adopted as the acme of success as a Blacksmiths' Forge. Their construction in Bracing and Bridging of angle steel for stiffness is perfection.

Hearth is formed from a single sheet of No. 10 gauge steel plate with edges reinforced with 3/4-inch angle iron, making it absolutely seamless—therefore, rust proof and indestructible.

These Forges are furnished regularly with No. 400 Champion "Whirlwind" Blast Anti-clinker Heavy Nest Tuyere Iron without extra cost.

It has the benefit received from the condensation of the heat to the center of the fire from the circular rotary Whirlwind Blast with no waste of heat going up the chimney, and will soon save enough in the cost of coal alone to pay for the Forge.

These Forges meet every demand from light up to the heaviest work.

Crank Turns either way to make a Blast.

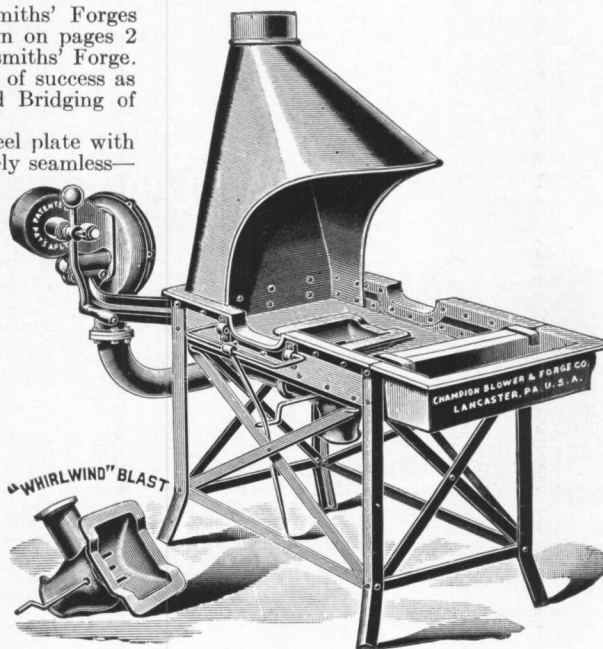
Each Turn of the Crank produces 46 complete Revolutions of the Blast Wheel. All Blower Speeds should be counted before purchasing, as high speed of the Fan Wing can only make a High Pressure White Heat Blast.

| No. | Hearth | Fan | Height | Weight | Code |
|-----|--------------|-----|--------|----------|-----------|
| 408 | 30 x 36 x 6" | 12" | 30" | 300 lbs. | Fachsieb |
| 409 | 30 x 40 x 6" | 12" | 30" | 315 lbs. | Fachtöfel |
| 33 | 30 x 36 x 6" | 30" | 30" | 220 lbs. | Falltrank |
| 34 | 30 x 40 x 6" | 30" | 30" | 235 lbs. | Falltuch |

Horseshoers' Full Hood, extra

Water Tank, extra

No. 33 and 34 Forges are same as No. 408 and 409 Forges less Blower Head, Blower Arm and Pipe.



No. 408



CHAMPION CAST IRON BLACKSMITH FORGES

Size of Hearth, 28 x 40 Inches Size of Hearth, 32 x 45 Inches Fan, 12 Inches in Diameter
Made with Adjustable Ball Bearings Only

Champion Cast Iron Hearth Blacksmith Forges are large and supplied with a deep Coal Box which is entirely out of the way, keeping the coal in any degree of dampness.

The Blower used is the Famous 400 Champion "Patented" High-Speed Spiral-Gear Blower shown on pages 2 and 3.

The Forge is supplied with the No. 400 Champion "Whirlwind" Blast Anti-Clinker Heavy Nest Tuyere Iron.

The Blast of these Forges is sufficient for the heaviest as well as the lightest work and for use in Blacksmith shops, Garages, Machine shops, etc., and any special work.

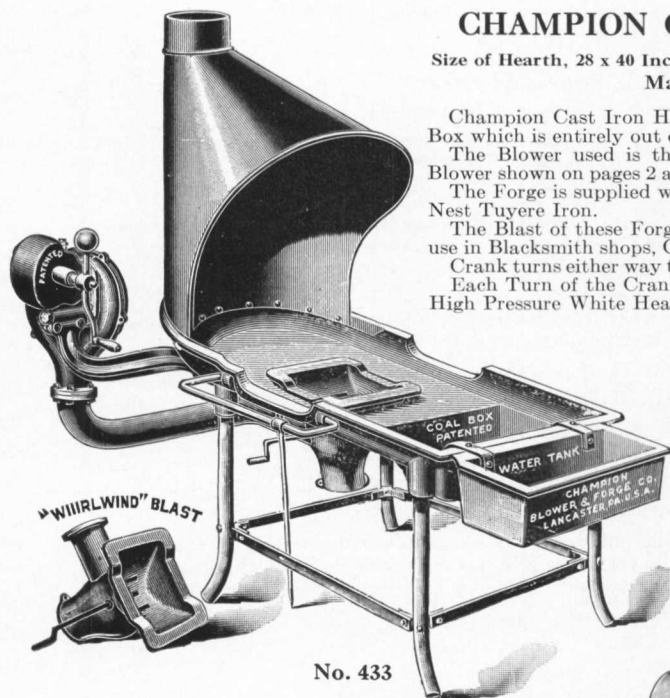
Crank turns either way to make a Blast.

Each Turn of the Crank produces 46 complete Revolutions of the Blast Wheel, making a High Pressure White Heat Blast.

| No. | Hearth | Fan | Weight | Code |
|------|----------|-----|----------|-----------|
| 433 | 32 x 45" | 12" | 400 lbs. | Fabagella |
| 433A | 28 x 40" | 12" | 325 lbs. | Fredame |
| 11 | 32 x 45" | | 300 lbs. | Fallthor |

Water Tank, Extra

No. 11 Forge same as No. 433 Forge less Blower Head, Blower Arm and Pipe



No. 433

CHAMPION LARGE CAST IRON FORGES

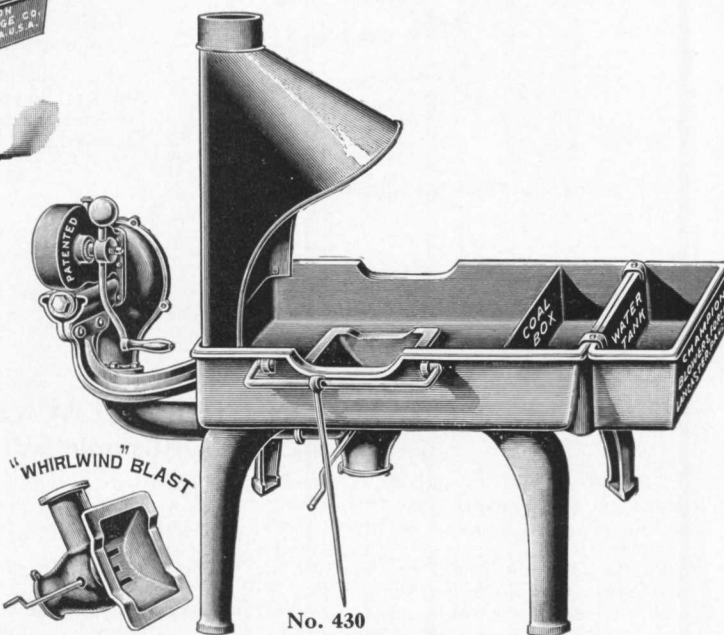
Made with Adjustable Ball Bearings Only

The Champion Large Cast Iron Blacksmith Forges represent the largest Blacksmith Forges built. For Railroad Shops, Plow Works, Heavy Wagon Works, and Blacksmith Shops making extra heavy work a specialty. The Hearths are built of cast iron and very heavy, that can be built up with fire brick, giving every advantage that can be had with a Forge built out of stone or brick. The Blower attached to these Forges is the Famous 400 Champion "Patented" High-Speed Spiral-Gear Blower illustrated on pages 2 and 3.

Supplied with the No. 400 Champion "Whirlwind" Blast Anti-Clinker Heavy Nest Tuyere Iron.

| No. | Hearth | Depth | Fan | Height | Weight | Code |
|------|----------|-------|-----|--------|----------|----------|
| 430 | 38 x 42" | 7" | 12" | 26" | 535 lbs. | Faltamos |
| 430½ | 38 x 42" | 3½" | 12" | 26" | 480 lbs. | Faltnut |

With Water Tank, extra



No. 430

CHAMPION BOILERMAKERS' RIVET AND MACHINISTS' FORGES

Made with Adjustable Ball Bearings Only

No. 434 Champion Boilermakers' Forge, with shield, is supplied with the No. 400 Champion "Patented" High-Speed Spiral Geared Blower as shown on pages 2 and 3.

Size of hearth makes it a large Forge for Boilermakers Bridge Builders, Ship Builders, Railroad Shops, Tank Builders, and Garages. It is guaranteed to supply sufficient blast for welding 4-inch iron in ten minutes with great ease.

No. 435 Champion Machinists' Forge is the same as the No. 434 Forge with Half Hood. For Machinists, Plumbers, Miners, Marble Workers, Millers, Railroad Repair Shops, Locksmiths, Planters and Manufacturers.

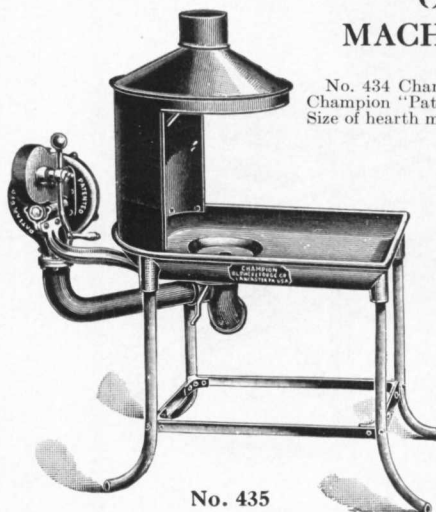
No. 437 Champion Rivet Forge is a desirable Forge for Jewelers, Bicycle Repairers, Tempering Tools, Tank Builders, Miners, Prospectors, Boilermakers, Bridge Builders, Elevated Railroads, etc. Crank Turns either way to make a Blast.

Each Turn of the Crank produces 46 complete Revolutions of the Fan Wheel.

No. 438 Champion Toolmakers' Forge is the same as the No. 437 Forge, with Half Hood.

| No. | Hearth | Fan | | Height | Weight | Code |
|-----|----------|-----|-------------|--------|----------|------------|
| 434 | 23 x 35" | 12" | Wind Shield | 30" | 225 lbs. | Fabalibus |
| 435 | 23 x 35" | 12" | Half Hood | 30" | 245 lbs. | Fabaries |
| 11¼ | 23 x 35" | | Half Hood | 30" | 160 lbs. | Falcolotto |
| 437 | 22" | 9" | Wind Shield | 33" | 170 lbs. | Fabbrile |
| 438 | 22" | 9" | Half Hood | 33" | 195 lbs. | Fabelhaft |

No. 11 ¼ Forge same as No. 438 less Blower Hose, Blower Arm and Pipe.



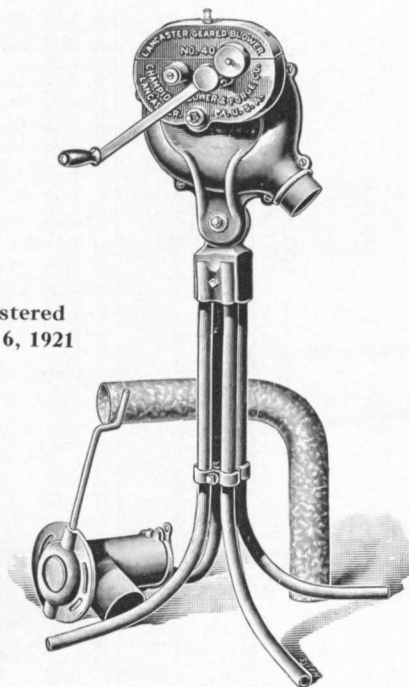
No. 435



No. 437



CHAMPION LANCASTER GEARED BLOWERS



Trade Mark Registered
No. 146,439, Sept. 6, 1921

No. 40L

The Champion Lancaster Geared Blowers show improvement in general construction, which makes them the best low-priced blower that has ever been placed on the market.

The improvement consists of an increase in the size of the gear case, allowing larger gears and larger bearings, whereby the life of the blower is doubled, and the fan case is constructed heavier and stronger.

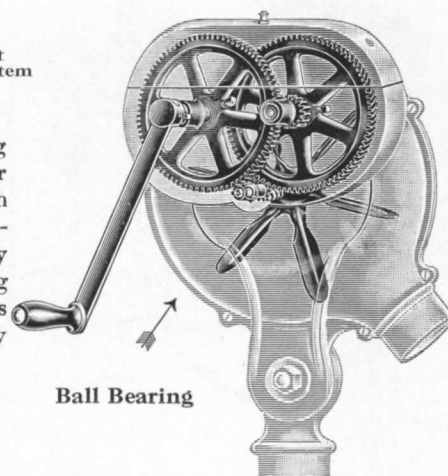
The Champion Lancaster Geared Blowers are well built, low priced, direct-driven blowers which meet the demand for a lower priced blower than the Famous 400 Champion "Patented" High Speed Spiral-Geared Blower, shown on pages 2 and 3. This Blower is supplied with the Champion Patent Adjustable Nozzle Tuyere Iron and Pipe complete. Extra large gears are used, all accurately cut, running in a bath of oil and all lubricated same as on our higher priced Blowers. The high speed spindle is equipped with ball bearing—the only Ball Bearing Blower at its price on the market. It is smooth running, with the crank turning either direction to make the blast.

| No. | Fan | Weight | Code |
|-----------|-----|----------|----------|
| 40L Legs | 12" | 100 lbs. | Fabust |
| 40½ Bench | 12" | 75 lbs. | Fabustem |

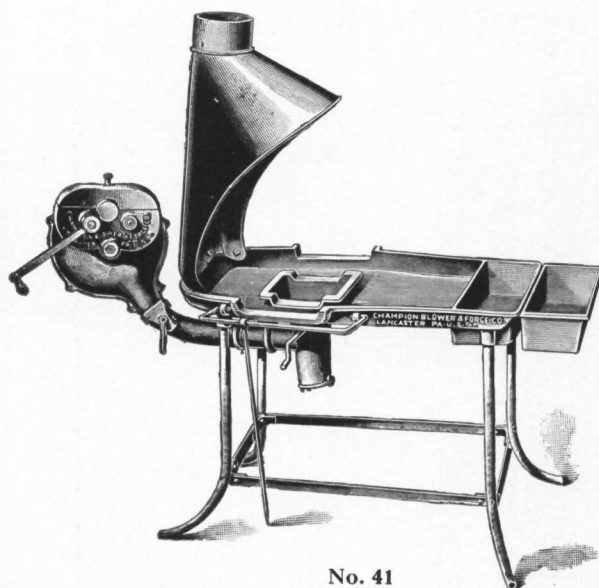


No. 40½

The No. 40 Champion Lancaster Gearing is large and accurately cut. All the higher speed gears are helical cut, insuring smooth easy running. The shafts are bushed, permitting replacement if wear develops in any bearing at a nominal cost, without discarding the entire Blower. The high-speed shaft is equipped with ball bearing, insuring easy running.



Ball Bearing



No. 41

CHAMPION LANCASTER GEARED AGRICULTURAL FORGE

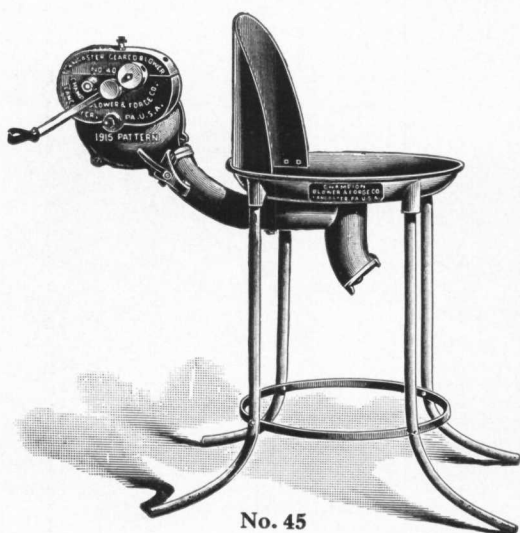
Size of Hearth, 23 x 35 Inches

Fan, 12 Inches in Diameter

No. 43 Champion Lancaster Geared Agricultural Forge is the same in its direct gearing for making blast as the No. 40 Lancaster Geared Blower, page 7. This makes a well-built, low-priced, direct-drive forge; a good blast producer and is recommended for farmers' use. It is well finished in every respect with a large size hearth and fan, and is a suitable Agricultural Forge where a direct-drive forge of these dimensions is required.

No. 42 Champion Lancaster Geared Direct-Drive Agricultural Forge is the same as No. 43, except that it has a shield in place of a half hood.

| No. | Hearth | Fan | Height | Weight | Code |
|-----|----------|-----|--------|----------|------------|
| 43 | 23 x 35" | 12" | 30" | 215 lbs. | Fabrefacto |
| 42 | 23 x 35" | 12" | 30" | 200 lbs. | Fabriker |



No. 45

CHAMPION LANCASTER GEARED BLACKSMITH FORGES

Size of Hearth, 32 x 45 Inches

Size of Hearth, 28 x 40 Inches

Fan, 12 Inches in Diameter

Champion Lancaster Geared Blacksmith Forges are well-built, direct-drive Blacksmith Forges with Cast Iron Hearth which has been built to meet the demand for cheaper Forges.

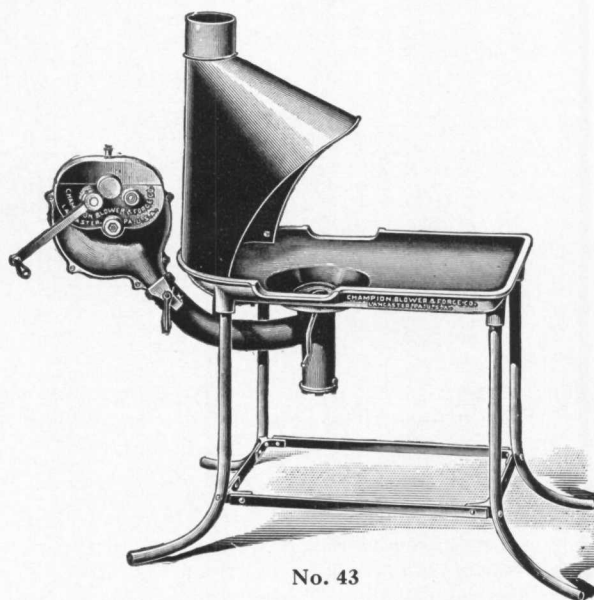
The Blower and Gearing used on these Forges are precisely the same as the No. 40 Blower shown on page 7.

The Tuyere Iron used on this Forge is a Heavy Nest Ball Tuyere Iron, weighing 50 lbs.

It therefore represents complete, well-built Blacksmith Forges at a very reasonable price.

| No. | Hearth | Fan | Height | Weight | Code |
|-----|----------|-----|--------|----------|--------|
| 41 | 32 x 45" | 12" | 30" | 385 lbs. | Fabulo |
| 41A | 28 x 40" | 12" | 30" | 385 lbs. | Freely |

With water tank, extra



No. 43

CHAMPION LANCASTER GEARED AGRICULTURAL FORGE

With Shield

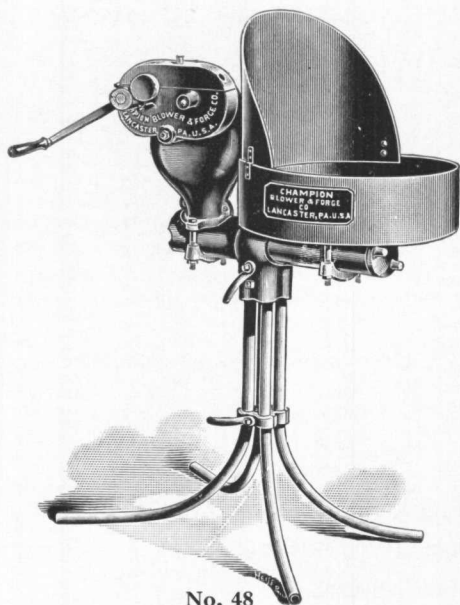
Size of Hearth, 22 Inches

Fan, 10 Inches in Diameter

No. 45 Champion Lancaster Geared Agricultural Forge with shield is a suitable direct-drive forge for Farmers, Garage and general use where a well-built, cut-gear, low-priced, good blast producer is desired. The gearing for making blast is similar to the No. 40 Lancaster Geared Blower, page 7. It is a strong light forge for all kinds of portable work. It can be easily carried about and makes the best low-priced rivet forge ever manufactured for heating or preheating with coal or charcoal.

No. 46 Champion Lancaster Geared Agricultural Forge with half hood is the same in construction and finish as No. 45, except that it is supplied with half hood in place of shield, making it suitable for tempering tools and inside work in garages and elsewhere.

| No. | Hearth | Fan | Weight | Code |
|-----|--------|-----|----------|---------|
| 45 | 22" | 10" | 135 lbs. | Fabaraz |
| 46 | 22" | 10" | 145 lbs. | Fabison |



No. 48

CHAMPION LANCASTER GEARED RIVET FORGES

Size of Hearth, 18 Inches

Fan, 10 Inches in Diameter

No. 48 Champion Lancaster Geared Rivet Forge is a moderate priced forge with Ball Bearings on the high speed shaft. This Steel Forge is supplied with the Lancaster Geared Blower used and shown on Forge No. 45, shown on page 8, making it a very convenient, light and serviceable Rivet Forge at a moderate price.

For further particulars as to gearing and construction of this Blower, read description of No. 40 Blower on page 7.

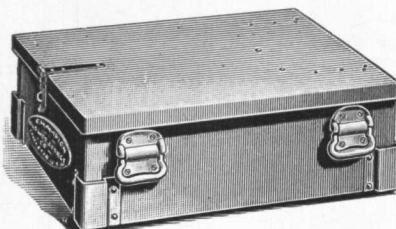
| No. | Hearth | Fan | Height | Weight | Code |
|-----|--------|-----|--------|----------|----------|
| 48 | 18" | 10" | 30" | 110 lbs. | Fabo |
| 48A | 22" | 10" | 30" | 120 lbs. | Faboter |
| 48B | 24" | 10" | 30" | 125 lbs. | Fabotest |

With half hood, extra

CHAMPION LANCASTER GEARED ARMY AND NAVY FOLDING FORGE

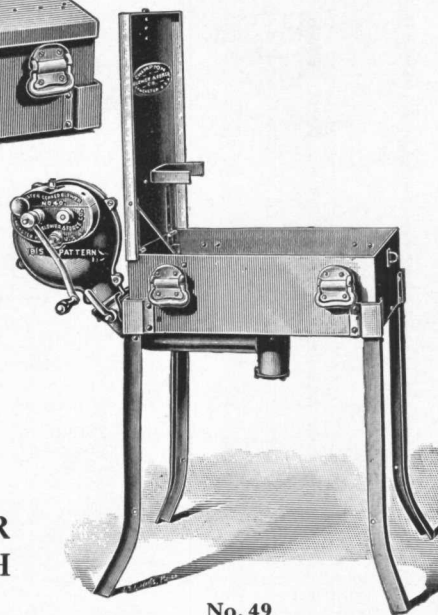
Size of Hearth, 18 x 22 x 7 Inches

Fan, 10 Inches in Diameter



No. 49 Champion Lancaster Geared Army and Navy Folding Forge is of the latest design, with the legs, tuyere pipe and blower head detachable, yet when assembled—rigidly attached in their proper position. When the loose parts are detached and packed in the case, they are firmly held in place, withstanding any amount of rough handling without breakage. This Forge is equipped with pressed steel handles to lift the forge about. The Gearing is the same type as the Lancaster Geared Blower, shown on page 10, equipped with helical high-speed gearing, making it the best low-priced Folding Forge on the market.

| No. | Hearth | Fan | Height | Weight | Code |
|-----|--------------|-----|--------|----------|---------|
| 49 | 18 x 22 x 7" | 10" | 28" | 110 lbs. | Franker |

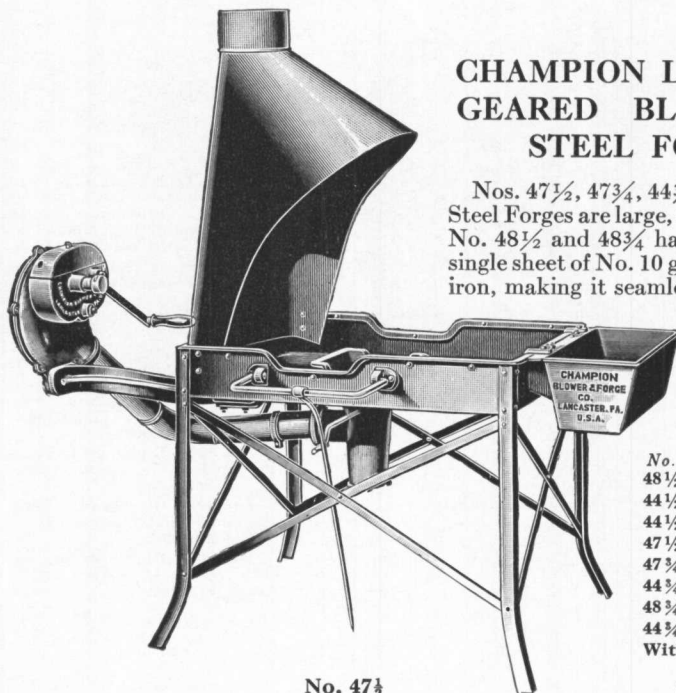


No. 49

CHAMPION LANCASTER GEARED BLACKSMITH STEEL FORGES

Nos. 47½, 47¾, 44¾ and 44¾A Champion Lancaster Geared Blacksmith Steel Forges are large, substantially built Forges with Heavy Nest Tuyere Iron. No. 48½ and 48¾ have Tuyere like No. 48 Forge. Hearth is formed from a single sheet of No. 10 gauge steel plate, with edges reinforced with ¾-inch angle iron, making it seamless—therefore, rust proof and indestructible; with legs securely riveted and substantially braced to the hearth.

The Blower is the No. 40 Blower with a Heavy Nest Tuyere Iron, making an excellent low-priced Blacksmith Forge.



No. 47½

| No. | Hearth | Fan | Wind Shield | Height | Weight | Code |
|------|--------------|-----|-------------|--------|----------|-----------|
| 48½ | 24 x 24 x 6" | 12" | Wind Shield | 30" | 170 lbs. | Fataca |
| 44½ | 30 x 30 x 6" | 12" | Wind Shield | 30" | 295 lbs. | Fasern |
| 44½A | 24 x 30 x 6" | 12" | Wind Shield | 30" | 265 lbs. | Freemason |
| 47½ | 30 x 36 x 6" | 12" | Half Hood | 30" | 300 lbs. | Fakir |
| 47¾ | 30 x 40 x 6" | 12" | Half Hood | 30" | 315 lbs. | Falhize |
| 44¾ | 30 x 30 x 6" | 12" | Half Hood | 30" | 300 lbs. | Faseole |
| 48¾ | 24 x 24 x 6" | 12" | Half Hood | 30" | 185 lbs. | Fautor |
| 44¾A | 24 x 30 x 6" | 12" | Half Hood | 30" | 275 lbs. | Freeness |

With water tank, extra



CHAMPION EUREKA GEARED BLOWER

NO. 140

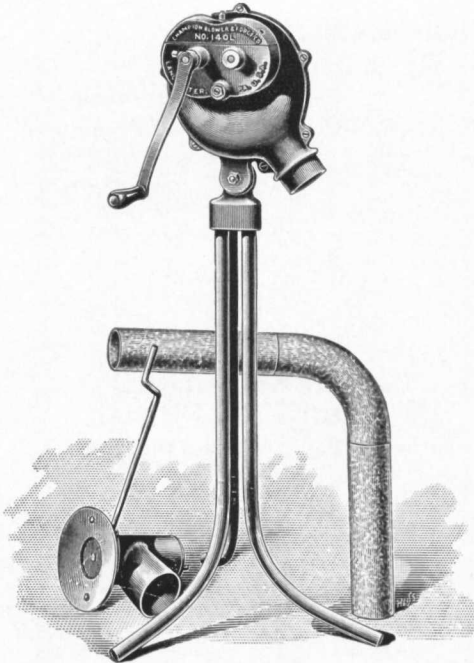
48 Revolutions of Blast Wheel to One Turn of Crank

The Champion Eureka Geared Blower is built to meet the demands of the small blacksmith and farmer, who desires a low-priced blower producing a blast sufficient for all needs.

This blower is built with high-speed helical gearing, giving 48 revolutions of the blast wheel to one turn of the crank, and the gearing is enclosed in a dust-proof, oil-tight, rigid cast iron gear case. It is smooth running, with crank turning either direction to make the blast.

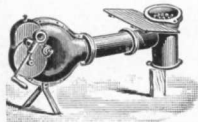
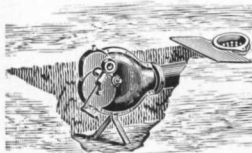
It is furnished with a Ball Tuyere Iron and pipe complete.

| No. | Fan | Weight | Code |
|-----|-----|---------|------------|
| 140 | 10" | 60 lbs. | Gabuntaler |



No. 140

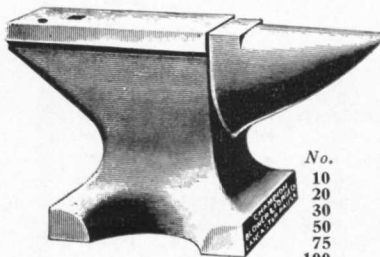
CHAMPION PROSPECTORS', MINERS' AND TOOL CHEST FORGE NO. 27



The Champion Prospectors', Miners' and Tool Chest Forge for Prospectors and Miners is compact, light in weight and convenient without sacrificing a first class blast. The blower is run by direct gearing and the tuyere iron is connected to the blower by piping, making it a strong and substantial Forge. With the legs folded the blower and tuyere iron are in a straight line making it convenient to strap to a burro for Prospectors or in a tool chest.

The various cuts show how the Blower can be set up to a clay hearth under different conditions.

| No. | Fan | Weight | Code |
|-----|-----|---------|---------|
| 27 | 8" | 40 lbs. | Fabaray |



| No. | Height | Overall | Machined Surface | Hardie Hole | Round Hole | Weight |
|-----|---------|---------|------------------|--------------|------------|----------|
| 10 | 4" | 7 3/4" | 5 x 2 1/4" | 5/8 x 5/8" | none | 10 lbs. |
| 20 | 5 1/4" | 10" | 6 x 2 1/2" | 1/2 x 1/2" | none | 20 lbs. |
| 30 | 6 1/4" | 11" | 7 1/4 x 2 5/8" | 7/16 x 7/16" | none | 30 lbs. |
| 50 | 7 1/8" | 15" | 8 3/4 x 2 7/8" | 5/8 x 5/8" | 7/16" | 50 lbs. |
| 75 | 8 1/2" | 18 5/8" | 11 1/8 x 3" | 5/8 x 5/8" | 7/16" | 75 lbs. |
| 100 | 8 1/2" | 20" | 12 3/4 x 3 1/8" | 5/8 x 5/8" | 1/2" | 100 lbs. |
| 150 | 11 5/8" | 25 1/2" | 15 1/4 x 4" | 1 x 1" | 5/8" | 150 lbs. |

CAST IRON ANVIL

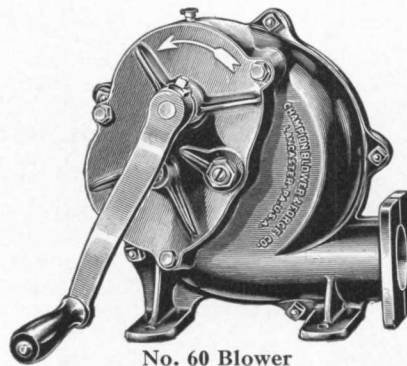
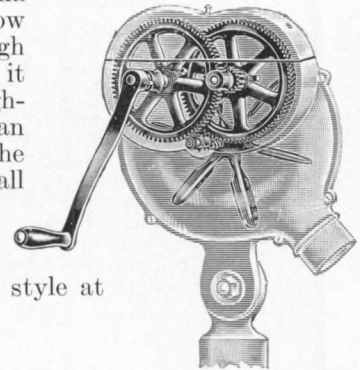
Champion Cast Anvils are made of the very highest grade, tough cast iron, with face chilled and ground to an extremely smooth finish. These anvils are made in seven sizes, weighing approximately 10, 20, 30, 50, 75, 100 and 150 pounds each.

| No. | Height | Overall | Machined Surface | Hardie Hole | Round Hole | Weight |
|-----|---------|---------|------------------|--------------|------------|----------|
| 10 | 4" | 7 3/4" | 5 x 2 1/4" | 5/8 x 5/8" | none | 10 lbs. |
| 20 | 5 1/4" | 10" | 6 x 2 1/2" | 1/2 x 1/2" | none | 20 lbs. |
| 30 | 6 1/4" | 11" | 7 1/4 x 2 5/8" | 7/16 x 7/16" | none | 30 lbs. |
| 50 | 7 1/8" | 15" | 8 3/4 x 2 7/8" | 5/8 x 5/8" | 7/16" | 50 lbs. |
| 75 | 8 1/2" | 18 5/8" | 11 1/8 x 3" | 5/8 x 5/8" | 7/16" | 75 lbs. |
| 100 | 8 1/2" | 20" | 12 3/4 x 3 1/8" | 5/8 x 5/8" | 1/2" | 100 lbs. |
| 150 | 11 5/8" | 25 1/2" | 15 1/4 x 4" | 1 x 1" | 5/8" | 150 lbs. |

10

NO. 140 CHAMPION EUREKA GEARING SHOWN IN DETAIL

The No. 140 Champion Eureka Gearing is spur cut on the slow speed shaft and helical on the high speed gear and pinion, making it noiseless and easy running throughout with greater speed to the fan shaft per turn of the crank. The High Speed shaft runs on the ball thrust at the end of the shaft. All gears are set in a cast-iron, dust-proof gear case, insuring rigidity not found in any other style at equal price.



No. 60 Blower

No. 60 HAND-DRIVEN FANS

for

Forges, Furnaces, Gas Producer Plants, and Ventilating Galleries, Underground Passages through manholes, cellars, and ship holds, etc.

All Gears machine cut, high speed gears are helical. Gear ratio is 48 to 1. Blast wheel is carefully balanced, giving large blast with few revolutions. Can be used as an Exhauster as well as a Blower. Made in four sizes. Heavy Tuyere extra.

No. 60AA. Diameter fan case, 6"; outlet, 1 1/2"; weight 10 lbs. Code—Sorat.

No. 60A. Diameter fan case 8"; outlet, 2"; weight, 15 lbs Code—Sorat.

No. 60B. Diameter fan case, 10"; outlet, 2 1/2"; weight, 22 lbs Code—Sorbis.

No. 60C. Diameter fan case, 12"; outlet, 3"; weight, 30 lbs Code—Sorcier.



CHAMPION EUREKA GEARED FORGES

With Cast Iron Hearth

48 Revolutions of Blast Wheel to One Turn of Crank



No. 142

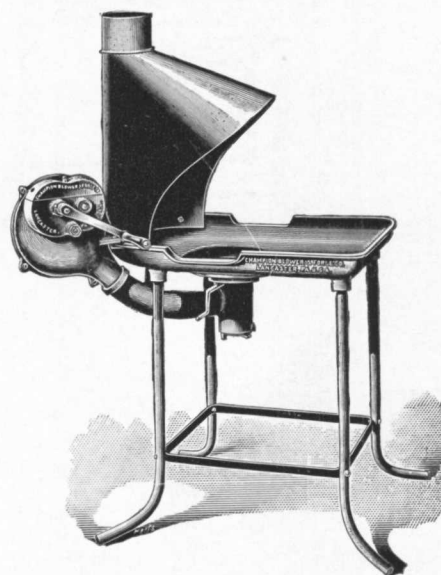
Size of Hearth, 23 x 30 Inches
Size of Hearth, 20 x 26 Inches
Size of Hearth, 18 x 20 Inches

Champion Eureka Geared Forges are equipped with a Cut-Geared, Crank-Driven Blower, helical gearing being used to give smooth running and noiseless operation. The gear ratio, 48 revolutions of the blast wheel to one turn of the crank, makes a strong, steady, high-pressure blast with smooth easy turning—crank turning either direction. The gear case is cast iron, rigid, oil-tight and dust-proof.

Fan, 10 Inches in Diameter
Fan, 10 Inches in Diameter
Fan, 8 Inches in Diameter

The large size hearth makes it very desirable for Machinists, Garages, Farmers, etc., or any place where a good commodious forge is desired.

| No. | Hearth | Fan | | Height | Weight | Code |
|-----|----------|-----|------------|--------|----------|----------|
| 142 | 23 x 30" | 10" | Windshield | 30" | 140 lbs. | Gaber |
| 143 | 23 x 30" | 10" | Half Hood | 30" | 145 lbs. | Gabest |
| 242 | 20 x 26" | 10" | Windshield | 30" | 115 lbs. | Gameor |
| 243 | 20 x 26" | 10" | Half Hood | 30" | 120 lbs. | Gamanate |
| 104 | 18 x 20" | 8" | Half Hood | 30" | 90 lbs. | Gambit |



No. 143

CHAMPION EUREKA GEARED FORGES

With Cast Iron Hearth

48 Revolutions of Blast Wheel to One Turn of Crank

Diameter of Fan, 8 Inches



No. 147

Size of Hearth, 22 Inches

Champion Eureka Geared Forges are larger in hearth than is usually put on low-priced forges.

These Improved Forges are equipped with a cut-gear, crank-driven blower, helical gearing being used to give smooth running and noiseless operation. The gear ratio gives 48 revolutions of the blast wheel to one turn of the crank, making a strong, steady, high-pressure blast with smooth, easy turning—crank turning either direction. The gear case is cast iron, rigid, oil-tight and dust-proof, giving modern advantages making them especially desired for general medium light work, such as Repairers, Garages, Farmers, etc.



No. 145

Size of Hearth, 18 Inches

| No. | Hearth | Fan | | Height | Weight | Code |
|-----|--------|-----|-------------|--------|---------|-------|
| 147 | 22" | 8" | Wind Shield | 30" | 80 lbs. | Gaten |
| 148 | 22" | 8" | Half Hood | 30" | 82 lbs. | Gatat |
| 145 | 18" | 8" | Wind Shield | 30" | 70 lbs. | Game |
| 146 | 18" | 8" | Half Hood | 30" | 72 lbs. | Gaman |

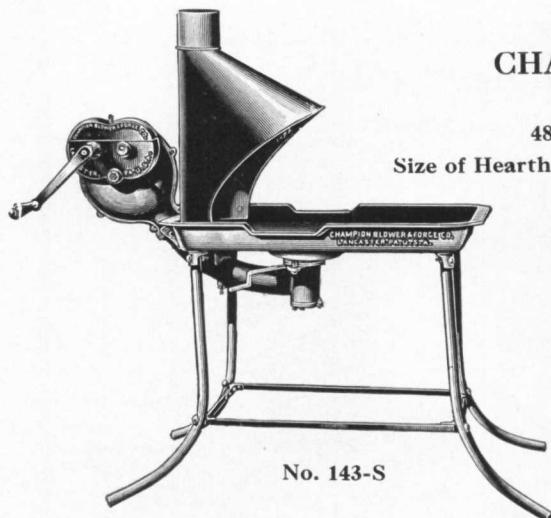


CHAMPION EUREKA GEARED FORGES With Pressed Steel Hearth

48 Revolutions of Blast Wheel to One Turn of Crank

Size of Hearth, 24 x 35 x 3 Inches

Fan, 12 Inches in Diameter



No. 143-S

No. 143-S Forge with Half Hood for indoor work is a good light-weight, medium-sized steel forge.

The Gears are cut and lay in a bath of oil, in an oil-tight, dust-proof gear case.

Crank turns either direction to produce blast, and these Forges are silent running and durable.

These Forges are supplied with Heavy Nest Ball Tuyere Iron, so a large fire can be produced to take bar work.

The above size Forge can be supplied with two different blower heads.

| No. | Head | Hearth | Hood | Fan | Height | Weight | Code |
|------|------|--------------|-----------|-----|--------|----------|----------|
| 143S | 140 | 24 x 35 x 3" | Half Hood | 12" | 30" | 145 lbs. | Frent |
| 142S | 140 | 24 x 35 x 3" | Shield | 12" | 30" | 140 lbs. | Frenas |
| 43S | 40 | 24 x 35 x 3" | Half Hood | 12" | 30" | 155 lbs. | Freakish |
| 42S | 40 | 24 x 35 x 3" | Shield | 12" | 30" | 150 lbs. | Fraus |

CHAMPION EUREKA GEARED FORGES

With Pressed Steel Hearth

48 Revolutions of Blast Wheel to One Turn of Crank
Diameter of Fan, 8 Inches

Champion Eureka Geared Forges are well-made, roomy, low-priced Forges for garage, machine shop, ranch or farm trade for general use. Are equipped with a cut-gear, crank-driven Blower—helical gears being used to give smooth running and noiseless operation. All gears run in a dust-proof, oil-tight gear case, which is cast iron—lining the gears up true, as there is no give like a steel gear case. Has double bearing supports to each end of the shaft and the high-speed shaft is equipped with ball end thrust bearing, eliminating friction. Hearths are pressed steel—made of heavy gauge. Forge legs are bolted to heavy hearths and braced at bottom, making the best all around low-priced Forges on the market.

No. 135-S Forge has short legs, proving an extremely convenient Forge for prospectors.



No. 147-S Forge
Size of Hearth, 24 Inches

| No. | Hearth |
|------|----------|
| 147S | 24" |
| 148S | 24" |
| 145S | 18" |
| 146S | 18" |
| 135S | 15 x 19" |
| 136S | 15 x 19" |

| Fan | Hood | Height | Weight | Code |
|-----|-------------|---------|---------|-----------|
| 8" | Wind Shield | 30" | 52 lbs. | Gatenly |
| 8" | Half Hood | 30" | 55 lbs. | Gataty |
| 8" | Wind Shield | 30" | 47 lbs. | Gamely |
| 8" | Half Hood | 30" | 50 lbs. | Gamonly |
| 7" | Wind Shield | 16 1/2" | 40 lbs. | Fratister |
| 7" | Half Hood | 16 1/2" | 45 lbs. | Fratacher |



No. 145-S Forge
Size of Hearth, 18 Inches

CHAMPION ELECTRIC STEEL FORGES FOR

HOME-CRAFT SERVICE AND GENERAL REPAIR WORK

Sturdy Motor, without radio interference.

Blast regulated by damper on intake.

Toggle Switch for starting and stopping, on fan case.

Ten feet of Cord, and attachment plug, furnished.

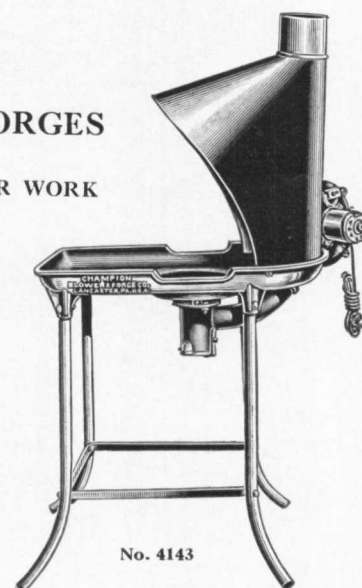
Pipe Legs, fully braced, used to guarantee rigid foundation.

Motor for 110 volts, 60 cycles, single phase, only.



No. 4145S

| No. | Hearth | Size | Half Hood or Shield | Fan | Ht. | Wt. | Code |
|-------|--------|--------|---------------------|-----|-----|-----|---------|
| 4142S | Steel | 24x35" | Shield | 10" | 30 | 145 | Sorgen |
| 4143S | Steel | 24x35" | Half Hood | 10" | 30 | 150 | Sorgho |
| 4147S | Steel | 24" | Shield | 8" | 30 | 52 | Sotaina |
| 4148S | Steel | 24" | Half Hood | 8" | 30 | 62 | Sotaner |
| 4145S | Steel | 18" | Shield | 8" | 30 | 48 | Sotaque |
| 4146S | Steel | 18" | Half Hood | 8" | 30 | 50 | Soterro |

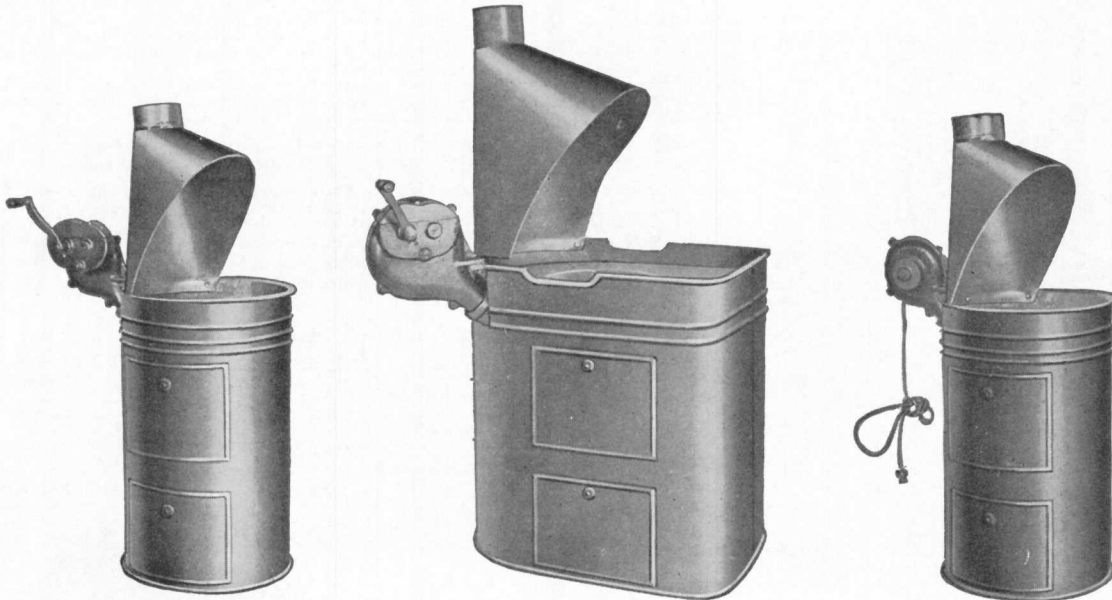


No. 4143



CHAMPION MODERN PORTABLE FORGES

NEAT — COMPACT — STRONG — USEFUL



No. 1146S with Hand Blower

No. 1143S with Hand Blower

No. 1146SE with Electric Blower

Our neat popular-priced line, especially serviceable for Home Workshop, Schools, Industrial as well as Farm Trade.

The modern streamlined design and general efficiency and compactness of these forges, with the fuel storage space beneath the hearth of the forge is of particular advantage. The smaller sizes hold 100 lbs. of blacksmith coal or coke, the larger sizes up to 300 lbs. The upper door in the base receives the fuel, which feeds automatically to the lower storage reservoir; then fuel is removed as required from the lower door. This fuel storage space is compact and keeps the room in which the forge is used, neat and always clean.

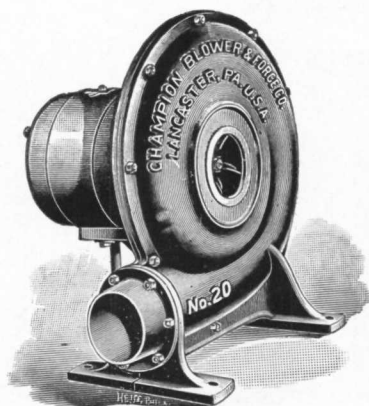
Champion Eureka Cut-Gear Hand Blowers will furnish blast to heat iron 3" thick in ten minutes. Cut gears run in oil, in dust-proof, oil-tight gear cases—crank turns either direction—without noise or vibration.

Champion Electric Blowers have sturdy motor, without radio interference. Blast regulated by damper on intake side. Toggle switch for starting and stopping, on fan case—attachment cord and plug. Motor for 110 volts, 60 cycles, single phase, only.

| No. | Hearth Size | Depth | Blower | Half-Hood or Shield | Fan | Height | Weight Pounds | Code |
|--------------|-------------|-------|----------|------------------------|-----|--------|------------------|------------|
| 1145S Steel | 18" Diam. | 3" | Hand | Shield | 8" | 30" | 70 | Celatoris |
| 1146S Steel | 18" Diam. | 3" | Hand | Half-Hood | 8" | 30" | 75 | Celature |
| 1147S Steel | 24" Diam. | 3" | Hand | Shield | 8" | 30" | 75 | Celaurite |
| 1148S Steel | 24" Diam. | 3" | Hand | Half-Hood | 8" | 30" | 100 | Celaverunt |
| 1143S Steel | 24" x 35" | 3" | Hand | Half-Hood | 10" | 30" | 185 | Celavimus |
| 1145SE Steel | 18" Diam. | 3" | Electric | Shield | 8" | 30" | 70 | Celavistt |
| 1146SE Steel | 18" Diam. | 3" | Electric | Half-Hood | 8" | 30" | 75 | Celdillas |
| 1147SE Steel | 24" Diam. | 3" | Electric | Shield | 8" | 30" | 75 | Celebrable |
| 1148SE Steel | 24" Diam. | 3" | Electric | Half-Hood | 8" | 30" | 80 | Celebrado |
| 1143SE Steel | 24" x 35" | 3" | Electric | Half-Hood | 10" | 30" | 185 | Celebramas |



CHAMPION DIRECT-CONNECTED ELECTRIC BLOWERS



No. 20. For One to Two Ordinary Fires
or for any purpose requiring 100 cu. ft. of air per minute, and 2 oz. pressure
Nos. 21, 121, 221, 321 to burn Buckwheat, Rice or Barley Coal for heating.

No. 20 Champion Constant Speed Electric Blower is recommended for one to two fires, or as a Blower for similar blast requirements such as Dry Rooms, Refrigerators, Forced Draft for boilers, heating furnaces, for heating oil field bits or general Oil Field work; in connection with heating kettles for cooking candy, as well as for ventilation.

When used in connection with two forge fires, each forge must have a blast gate to regulate the blast each forge requires. The best results are obtained when the Blower is set as close as possible to the work it is intended to do and avoid sharp turns in piping.

| No. | Height | Outlet | Inlet | R.P.M. | H.P. | Weight | Code |
|-----|--------|--------|-------|--------|------|---------|-------|
| 20 | 15" | 3½" | 3½" | 3500 | ½ | 65 lbs. | Facar |

NOTE: Above can be furnished as an Exhaust Fan if specially ordered.

Nos. 21, 121, 221, 321 Blowers are built for forced draft use in burning buckwheat and other small size coal, which reduces your coal bill one-half. Besides this saving, it produces complete combustion with less ashes and proper heat in the shortest possible time. They insure minimum consumption of coal and proper warmth.

| No. | H. P. | Height | Width | Size Outlet | Cu. Ft. Air per Minute | Pressure Ounces | R. P. M. | Weight | Code |
|---|-------|--------|-------|-------------|------------------------|-----------------|----------|----------|---------|
| 21 | 1/12 | 15" | 12" | 3½" | 150 | .8 | 1750 | 65 lbs. | Facar |
| For use with five square feet of grate surface | | | | | | | | | |
| 121 | 1/4 | 15" | 14" | 4½" | 250 | 1 | 1750 | 90 lbs. | Faccas |
| For use with ten square feet of grate surface | | | | | | | | | |
| 221 | 1/3 | 18" | 15" | 5½" | 400 | 1 | 1750 | 115 lbs. | Faccion |
| For use with fifteen square feet of grate surface | | | | | | | | | |
| 321 | 1/2 | 21½" | 18" | 6" | 600 | 1½ | 1750 | 160 lbs. | Fachear |
| For use with twenty square feet of grate surface | | | | | | | | | |

CHAMPION DIRECT-CONNECTED ELECTRIC BLOWER

No. 2. For One to Four Ordinary Fires

or for any purpose requiring 200 cu. ft. of air per minute, and 2½ oz. pressure

No. 2 Champion Constant Speed Electric Blower has been on the market for many years with thousands in use and giving the highest degree of satisfaction.

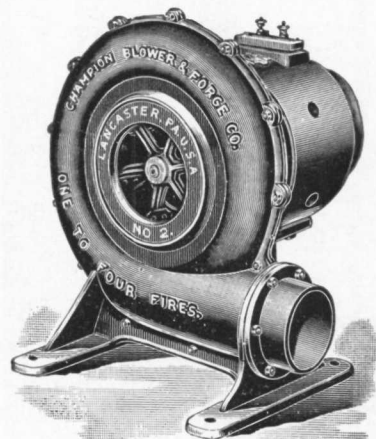
We recommend this Blower for four forge fires, and will operate equally as well for producing blast for other purposes such as heating furnaces, forced draft in boiler rooms, furnishing fresh air for ventilation, Dry Rooms, Laundries, Oil Field work, Machine Shops; in fact, any place where air is required.

When used in connection with forge fires, each forge must have a blast gate to regulate the blast each forge requires.

The best results, of course, are obtained when the Blower is set as near to the work as possible and avoid sharp turns in the piping.

| No. | Height | Outlet | Inlet | R.P.M. | H.P. | Weight | Code |
|-----|--------|--------|-------|--------|------|---------|--------|
| 2 | 15" | 3½" | 4½" | 3500 | ½ | 70 lbs. | Factat |

NOTE: Above can be furnished as an Exhaust Fan if specially ordered.



CHAMPION DIRECT-CONNECTED ELECTRIC BLOWER

No. 3. For One to Six Ordinary Fires

or for any purpose requiring 350 cu. ft. of air per minute, and 3 oz. pressure

No. 3 Champion Direct-Connected Constant Speed Electric Blower goes out to those looking for a real delivery of blast; therefore, in attaching a Motor to a Blower, we had no hesitancy in selecting the Champion Steel Pressure type of Fan Case, as we knew full well that with the large motor we supply, it would give satisfaction.

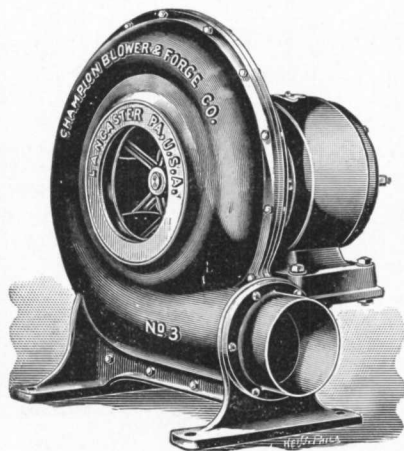
No. 3 Champion Electric Blower will operate six forge fires, and can be used for many other purposes such as on small foundry cupolas, furnaces, forging shops, heating drill bits for oil field work, forced draft for steam boilers, supplying fresh air for ventilating, or forcing air long distance where strong pressure is desired, laundry and dry rooms.

When used in connection with forge fires, a blast gate is required on each forge to regulate the blast required by each forge.

The best results are obtained when Blower is set as near to the work as possible, avoiding sharp turns in the piping.

| No. | Height | Outlet | Inlet | R.P.M. | H.P. | Weight | Code |
|-----|--------|--------|-------|--------|------|----------|------|
| 3 | 20" | 4½" | 6" | 3500 | 1½ | 185 lbs. | Fact |

NOTE: Above can be furnished as an exhaust fan if specially ordered.



Directions for Ordering Constant Speed Electric Blowers

1st—Is current direct or alternating.
2d—If alternating, find cycles, phase and voltage.

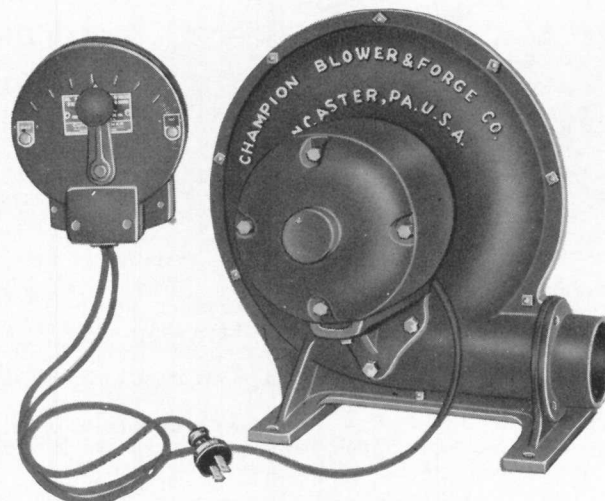
3d—60 cycles 110 or 220 volts furnished regularly.
4th—Other cycles or voltages are special.



THE CHAMPION VARIABLE SPEED ELECTRIC PRESSURE BLOWER

The Original Variable Speed Electric Blower

With totally enclosed regulator to comply with all National and Local Underwriters' Requirements



The Blowers with the BIG MOTOR
have

**Universal Motor for Both Alternating and Direct Current. Pressure from over 2,000
Revolutions Per Minute. Detached Totally Enclosed Regulator
with Six Speeds, 10-foot Attachment Cord and
Plug to attach to any Light Socket**

Champion Variable Speed Electric Blowers are especially built for blowing forge fires, furnaces, organs, and any other work requiring efficient blast.

These Blowers have the fan-case designed the same as our Steel Pressure Blowers, made by us for over forty-eight years and with snail-shape fan-case are built for high-pressure blast and durability.

The motor has silk-covered wire of the best insulation, is built with hammered steel shaft, sealed ball bearing, commutator with twenty-four bars of hard drawn copper, and large flat brushes which are staggered so that one brush does not track after the other on the commutator, insuring thereby double wearing life to the commutator.

Over 400,000 Champion Electric Blowers already sold have given us valuable experience, which we are glad to extend to our customers.

- 1st. The great failure in motor building is in overrating capacity, not allowing anything for endurance.
- 2d. The CHAMPION uses all modern methods of electrical design, and furnishes a motor fully 40% above requirements in power capacity, therefore giving GIANT POWER, thus insuring full capacity and endurance.
- 3d. All Champion MOTORS are ball bearing and fully enclosed with sufficient units of power guaranteed to run the Blower at highest speed of over 2,000 revolutions per minute, and at high pressure open and away from the fire for 10 hours without a single stop.
- 4th. All Champion Motors are built from the very highest grade of materials, best workmanship, and machinery of the latest up-to-date designs employed in winding and manufacturing the motor.

No. 50. For Regular Fire 1100 to 2350 R.P.M.

No. 51. For Extra Heavy Fire 1100 to 2875 R.P.M.

Variable Speed Universal either 110V or 220V Motor.

| Height | Outlet | Inlet | Weight | Code | R.P.M. | C.F.M. | S.P. | Height | Outlet | Inlet | Weight | Code | R.P.M. | C.F.M. | S.P. |
|--------|--------|-------|---------|-------|--------|--------|------|--------|--------|-------|---------|--------|--------|--------|------|
| 15" | 3" | 3" | 55 lbs. | Faces | 2175 | 163 | 0 | 15" | 3" | 3" | 70 lbs. | Faceor | 2600 | 190 | 0 |
| | | | | | 2475 | 120 | 1 | | | | | | 2750 | 156 | 1 |
| | | | | | 2600 | 89 | 2 | | | | | | 2900 | 130 | 2 |
| | | | | | 3000 | 30 | 4 | | | | | | 3500 | 87 | 4 |
| | | | | | 3450 | 0 | 5 | | | | | | 3725 | 61 | 5 |
| | | | | | | | | | | | | | 4000 | 0 | 6 |

Note.—Above can be furnished as an Exhaust Fan if specially ordered.

If #50 or #51 blowers are to be used for continuous duty use constant speed blowers #21 for 1750 R.P.M. or #20 for 3450 R.P.M.

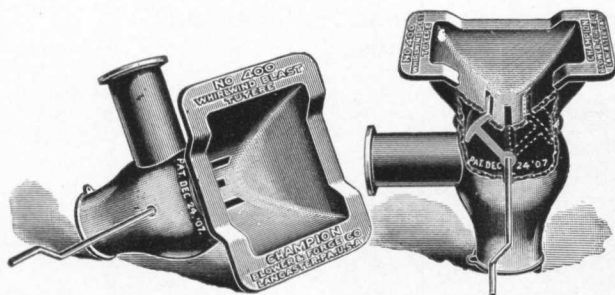


NO. 400 CHAMPION "WHIRLWIND" BLAST ANTI-CLINKER HEAVY NEST TUYERE IRON

For General Blacksmiths

A Tuyere Iron that makes a
"Whirlwind" Blast

Registered in U. S. Patent Office,
No. 49,691, Feb. 13, 1906



With Over One Million "Whirlwind" Blast Anti-Clinker Heavy Nest Tuyere Irons sold in forty years, with every user ready to testify that it heats Iron one-third quicker, besides a great reduction in Coal Bills when figuring up profits at the end of the year's work, Explains Why:—

The "Whirlwind" Blast Anti-Clinker Heavy Nest Tuyere Iron is:—A Tuyere Iron true to its name; A Tuyere Iron that produces a circular, rotary blast; A Tuyere Iron that will not blow the heat or hot air up and out of the chimney; A Tuyere Iron from which less blast is wasted 6 inches above the Tuyere than 4 feet above any other Tuyere Iron; A Tuyere Iron that concentrates the blast and heat in the Tuyere Nest, thus makes a hotter fire and heats one-third quicker.

Don't delay installing the "Whirlwind" Blast in your fires as it saves at least one-half the heating elements of your coal pile from going up the chimney in waste.

The "Whirlwind" is no secret. We invite comparison. Hold your hand over the top of the "Whirlwind" Blast Tuyere when the blower is in blast and do the same with any other Tuyere Iron and you will immediately discover that less blast is lost 6 inches above the "Whirlwind" Blast Tuyere than 4 feet above any other Tuyere. It will pay to take the time to look this up.

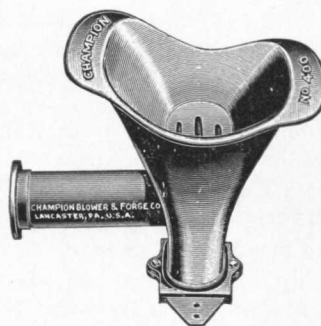
The "Whirlwind" Blast Anti-Clinker Heavy Nest Tuyere Iron is supplied with a revolving pick to remove the clinkers out of the side slots, therefore, the slots can always be kept open without disturbing the fire from the top, assuring you at all times a full capacity of blast and guaranteeing a clean powerful fire.

No. 400 Champion "Whirlwind" Blast Anti-Clinker Heavy Nest Tuyere Iron is 5 inches deep, 8½ inches wide and 10½ inches long, over all 12½ x 14½ inches; Weight, 55 lbs. Code—Fabulonis.

CHAMPION HEAVY NEST TUYERE IRONS

No. 4 Champion Heavy Nest Tuyere Iron is intended for large fires of all kinds. It is also very desirable for Horseshoers. It requires no claying up. Its walls are heavy enough to withstand the hottest fires. Size of nest 3½ inches deep at lowest curve point. Sides are 5½ inches high. Length of nest 12 inches, with a width of 10 inches over the top.

| No. | Over All Dimension | Inside Depth | Weight | Code |
|-----|-----------------------|-----------------|---------|---------|
| 4 | 14½ x 13½" | 5½" | 70 lbs. | Fragent |



No. 4



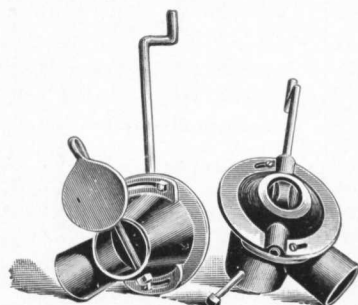
No. 400B

No. 400B Champion Heavy Nest Ball Tuyere Iron is furnished with a center blast heavy nest, ball and rod. This is strictly a first-class Tuyere Iron and will give satisfaction wherever used.

| No. | Over All Dimension | Inside Depth | Weight | Code |
|-------|-----------------------|-----------------|---------|----------|
| 400-B | 11½ x 14" | 4" | 50 lbs. | Fragelle |

No. 40 Patent Adj. Nozzle Tuyere Iron; Weight 15 lbs.
Code—Facilitate.

CHAMPION PATENT ADJUSTABLE NOZZLE TUYERE IRON



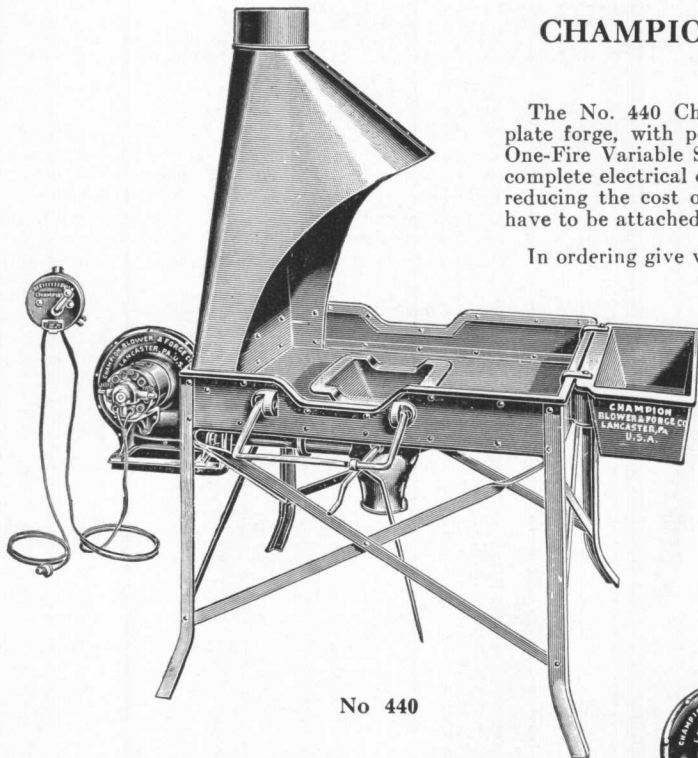
No. 40



CHAMPION ELECTRIC STEEL BLACKSMITH FORGE NO. 440

The No. 440 Champion Electric Driven Steel Forge represents a large steel plate forge, with perpendicular sides 6 inches high, with the Champion No. 50 One-Fire Variable Speed Electric Blower as shown on page 15, making it a very complete electrical outfit for those desiring a spacious steel-hearth forge; materially reducing the cost of a built-up brick hearth, to which an electric blower would have to be attached.

In ordering give voltage only.



No 440

| No. | Hearth | Height | Weight | Code |
|-----|----------|--------|----------|-------------|
| 440 | 30 x 36" | 30" | 285 lbs. | Facture |
| 449 | 30 x 40" | 30" | 300 lbs. | Facturater |
| 453 | 24 x 24" | 30" | 270 lbs. | Facturatest |
| 455 | 30 x 30" | 30" | 275 lbs. | Facturabus |

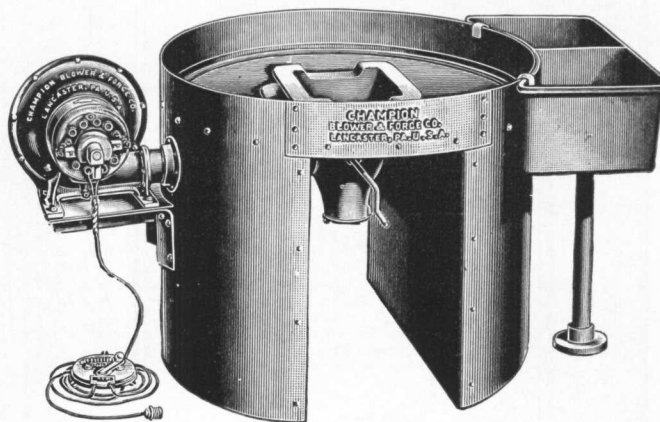
With full hood, extra

With water tank, extra

CHAMPION ELECTRIC ROUND HEARTH STEEL FORGES

The Champion Electric Round Hearth Steel Forges are built of heavy steel plate with structural iron, attached to which is the No. 50 One-Fire Variable Speed Electric Blacksmith Blower, shown on page 15, and recommended for Railway Shops or any place where extra heavy work is desired. These Forges are all equipped with the "Whirlwind" Blast Anti-Clinker Heavy Nest Tuvare Iron.

In ordering give voltage only.



No. 446

| No. | Hearth | Height | Weight | Code |
|-----|--------|--------|----------|------|
| 446 | 36" | 30" | 300 lbs. | Gamo |
| 447 | 48" | 30" | 400 lbs. | Gad |

With water tank, extra



No. 459

CHAMPION ELECTRIC STEEL RIVET FORGE NO. 459

No. 459 Champion Electric Steel Rivet Forge is built for Rivet and Shipbuilding Trade. The Motor is protected from the weather, enabling this Forge to remain in the open without the motor or starting rheostat sustaining any damage. The Blower is equipped with a Six-Speed Variable Speed Regulator, manipulated by handle attachment, as shown. The Hearth is exceptionally deep, permitting heating a large quantity of rivets at one time.

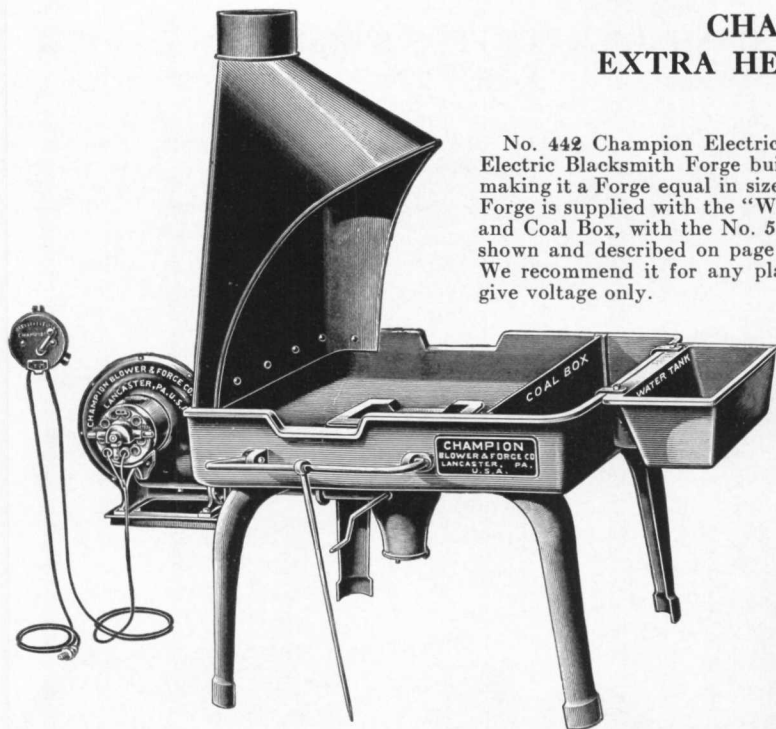
In ordering give voltage only.

| No. | Hearth | Height | Weight | Code |
|-----|--------|--------|----------|-------|
| 459 | 18" | 30" | 120 lbs. | Frost |



CHAMPION ELECTRIC EXTRA HEAVY CAST IRON FORGE NO. 442

No. 442 Champion Electric-Driven Extra Heavy Cast Iron Forge is the largest Electric Blacksmith Forge built. The size of the hearth is 38 x 42 x 7 inches deep, making it a Forge equal in size to any stationary brick forge that can be built. This Forge is supplied with the "Whirlwind" Blast Anti-Clinker Heavy Nest Tuyere Iron and Coal Box, with the No. 51 Champion Variable Speed Electric Blower attached, shown and described on page 15, and in every respect built for extra heavy work. We recommend it for any place where extra heavy work is expected. In ordering give voltage only.



No. 442

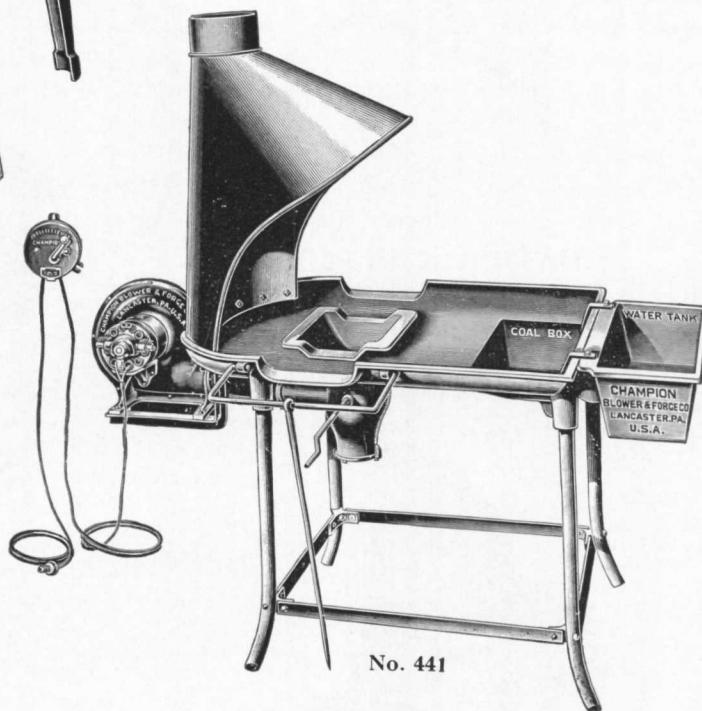
| No. | Hearth | Blower | Height | Weight | Code |
|------|------------------|--------|--------|----------|-----------|
| 442 | 38 x 42 x 7" | 51 | 26" | 510 lbs. | Fustolina |
| 442B | 39 x 52 x 7" | 51 | 26" | 605 lbs. | Fustonar |
| 442C | 48 x 62 x 7" | 51 | 26" | 925 lbs. | Fustonast |
| 442D | 38 x 42 x 3 1/2" | 50 | 26" | 490 lbs. | Fustonabt |

With water tank, extra

CHAMPION ELECTRIC CAST IRON BLACKSMITH FORGE NO. 441

No. 441 Champion Electric Driven Cast Iron Forge represents a large hearth Forge with "Whirlwind" Blast Anti-Clinker Heavy Nest Tuyere Iron and Champion Patented Coal Box, with the No. 50 Champion One-Fire Variable Speed Electric Blower, as shown and described on page 15 attached, making a very complete and practical Electric Blacksmith Outfit for those desiring a roomy heavy cast iron forge.

In ordering give voltage only.



No. 441

| No. | Hearth | Height | Weight | Code |
|---------|----------|--------|----------|-----------|
| 441 | 32 x 45" | 30" | 400 lbs. | Factavim |
| 441 1/2 | 28 x 40" | 30" | 300 lbs. | Facturant |

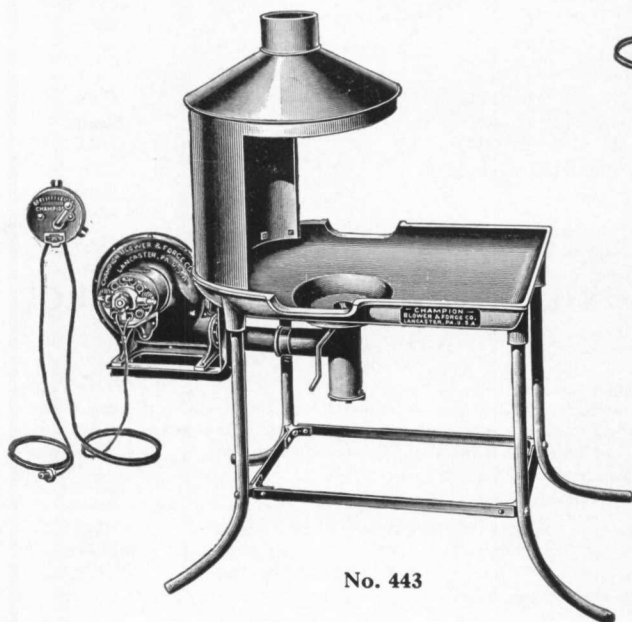
With water tank, extra

CHAMPION ELECTRIC CAST IRON MACHINISTS' FORGE NO. 443

No. 443 Champion Electric Driven Cast Iron Machinists' Forge represents a medium size Hearth Forge, with the No. 50 Champion One-Fire Variable Speed Electric Blower, shown and described on page 15, which makes a particularly good forge for garage use in heating and tempering.

In ordering give voltage only.

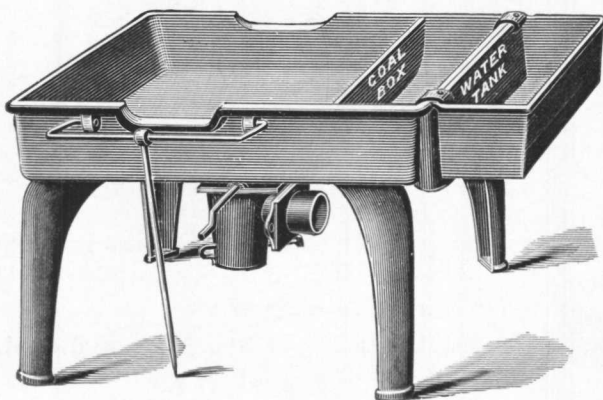
| No. | Hearth | Height | Weight | Code |
|-----|----------|--------|----------|---------|
| 443 | 23 x 35" | 30" | 250 lbs. | Fusames |



No. 443



CHAMPION STATIONARY BLAST FORGES



No. 12

Nos. 12, 12½, 13½ and 11½ Champion Stationary Blast Forges are made Extra Heavy for all kinds of black-smith fires,—far superior to building a forge of brick or stone. These Forges are made for power but can be used for hand, or electric blower as well. They are supplied with the Champion Blast Gate, Water Tank and the No. 400 Champion "Whirlwind" Blast Anti-Clinker Heavy Nest Tuyere Iron without extra cost.

| No. | Hearth | Height | Depth | Weight | Code |
|-----|----------|--------|-------|----------|----------|
| 12 | 38 x 42" | 26" | 7" | 400 lbs. | Faint |
| 12½ | 39 x 52" | 26" | 7" | 500 lbs. | Falated |
| 13½ | 48 x 62" | 26" | 7" | 720 lbs. | Falchion |
| 11½ | 38 x 42" | 26" | 3½" | 350 lbs. | Frafer |

With Half Hood, extra
Downdraft Hood, extra

The Champion Nos. 35, 36 and 36½ Round Steel Stationary Blast Forges are built from Heavy Steel Plate and Structural Steel. Where room is an object it often meets a demand no other Stationary Blast Forge can meet. They are supplied with the Champion Blast Gate, also No. 400 Champion "Whirlwind" Blast Anti-Clinker Heavy Nest Tuyere Iron. The Telescopic Canopy Hood is the most satisfactory and complete Forge Hood that ever has been placed on a Forge. The fact that the Hood is counter-balanced by a cast iron ring around the pipe makes it easy to raise or lower, and will remain without fastening at any height desired by the mechanic.

| No. | Hearth | Height | Weight | Code |
|-----|--------|--------|----------|----------|
| 35 | 36" | 30" | 250 lbs. | Fallugie |
| 36 | 48" | 30" | 375 lbs. | Fallunt |
| 36½ | 60" | 30" | 600 lbs. | Falzzone |

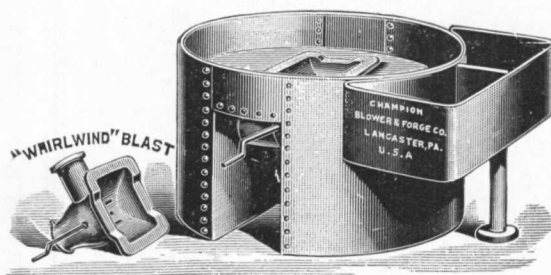
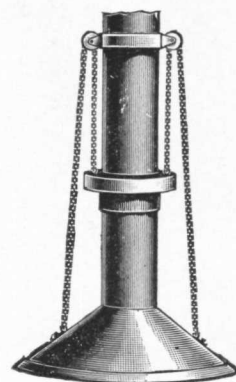
Water Tank, extra

Telescopic Hood, extra

No. 35 Champion Telescopic Canopy Hood, 36 In. in Diam.; Pipe, 9 In. in Diam.; Maximum Length, 9 Ft. 2 In.; Minimum Length, 6 Ft. 10 In.; Weight, 100 lbs. Code—Fallwild.

No. 36 Champion Telescopic Canopy Hood, 42 In. in Diam.; Pipe, 9 In. in Diam.; Maximum Length, 9 Ft. 2 In.; Minimum Length, 6 Ft. 10 In.; Weight, 110 lbs. Code—Fallsur.

No. 36½ Champion Telescopic Canopy Hood, 54 In. in Diam.; Pipe, 9 In. in Diam.; Maximum Length, 10 Ft.; Minimum Length, 7 Ft.; Weight, 150 lbs. Code—Falsiclen.



No. 35

The Champion Nos. 38, 39 and 39½ Square Steel Stationary Blast Forges are built for the Heaviest shop work possible out of Heavy Steel Plate and Structural Steel. They are well adapted for railroad shops and shipyards. They are supplied with a Champion Blast Gate and the No. 400 Champion "Whirlwind" Blast Anti-Clinker Heavy Nest Tuyere Iron.

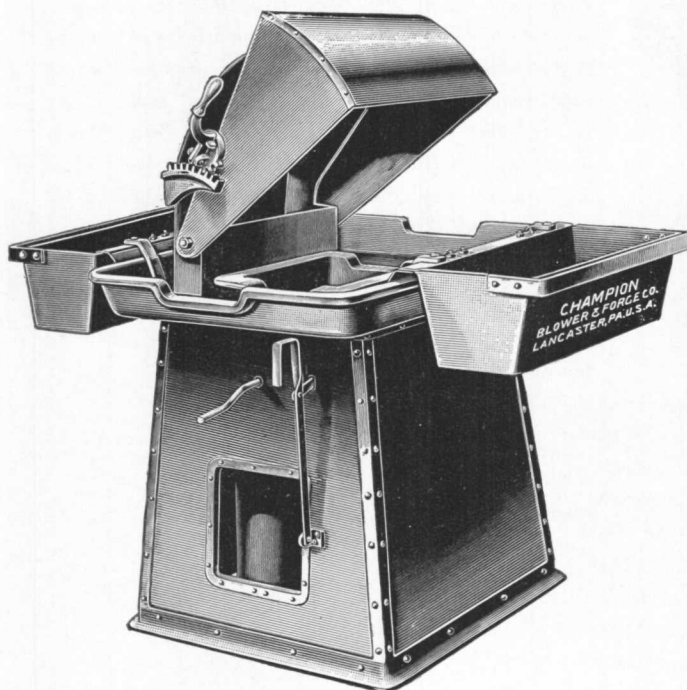
| No. | Hearth | Height | Weight | Code |
|-----|----------|--------|----------|----------|
| 38 | 42 x 42" | 25" | 375 lbs. | Fagot |
| 39 | 54 x 54" | 25" | 415 lbs. | Faror |
| 39½ | 72 x 72" | 25" | 550 lbs. | Faralous |

With Water Tank, extra.



No. 38

CHAMPION STATIONARY DOWN DRAFT FORGES

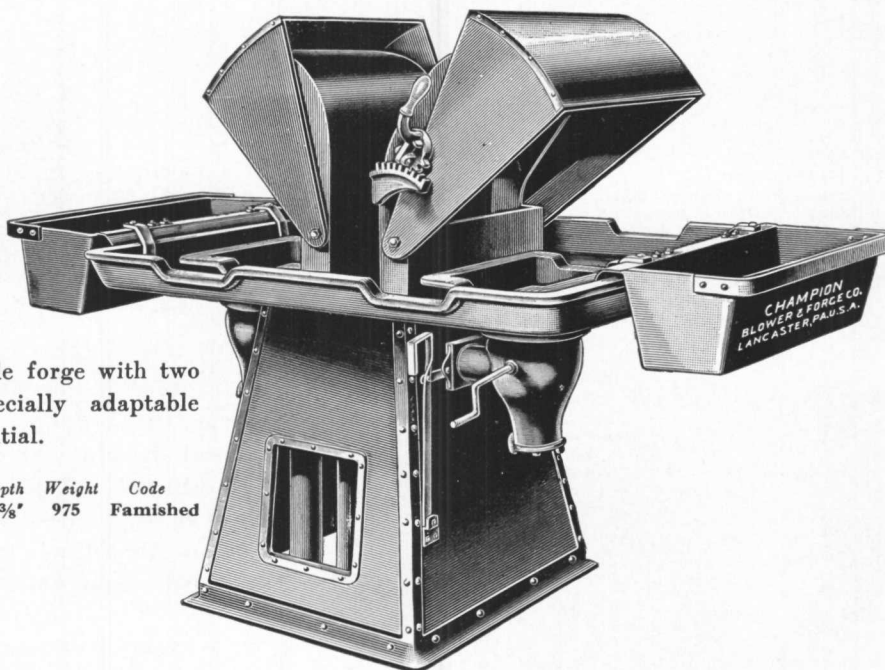


No. 202DD

No. 202DD Champion Stationary Down Draft Forge is one of the most popular types for Manual Training Service.

The hearth is cast iron, heavy and rigid, the base is constructed of steel. The No. 400 Champion Whirlwind Blast Anti-Clinker Heavy Nest Tuyere Iron is used. Furnished with blast gate, coal box and water tank.

| No. | Hearth | Height | Depth | Weight | Code |
|-------|----------|--------|--------------------|--------|--------|
| 202DD | 27 x 36" | 29" | 33 $\frac{3}{8}$ " | 552 | Famish |



No. 202DDD

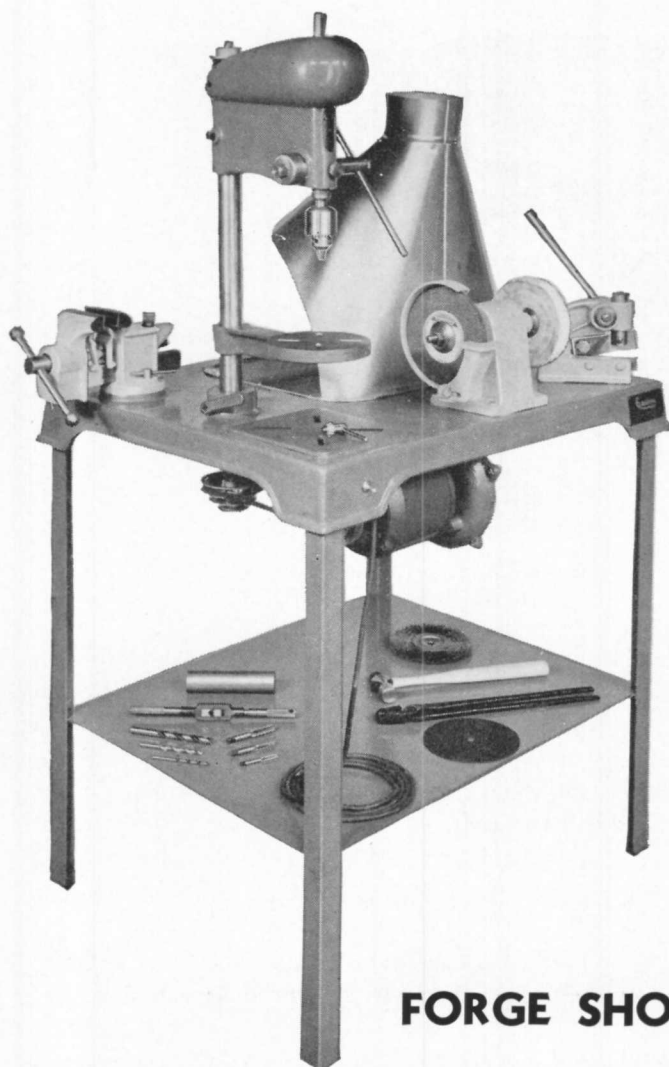
No. 202DDD is a double forge with two Tuyeres and hoods, especially adaptable where compactness is essential.

| No. | Hearth | Height | Depth | Weight | Code |
|--------|----------|--------|--------------------|--------|----------|
| 202DDD | 59 x 36" | 29" | 33 $\frac{3}{8}$ " | 975 | Famished |



Champion

NEW • ORIGINAL FORGE SHOP



A COMPACT WORKSHOP IN ONE UNIT FOR WORKING IRON, SHEET METAL, ALUMINUM OR BRASS. COMPLETE AND READY TO USE. FOR HOME WORKSHOP, HOBBYIST FARM AND FACTORY.

CONSTRUCT—Metal Chairs, Tables, Benches, Magazine Racks, Trellises, Railings, Weather Vanes, Signs, Firetools, and many other interesting household articles. All tools and equipment necessary come with unit ready to run.

COMPLETE AT ONE PRICE.

FORGE SHOP TOOLS

FORGE—Forge is used to heat metal of all kinds in order to bend, flatten or shape. Use regular smithing charcoal for fire to prevent smoking indoors.

WISE—3½" steel jawed machinist vise with generous anvil and horn. Equipped with cut-off hardie. Vise swivels 180° and is conveniently mounted next to forge.

DRILL PRESS—A 14" 2 speed ½" capacity drill press v-belt driven from electric motor. Drill can be swung radially around over vise in order to drill work clamped in vise or swung over floor to drill big work.

GRINDER—Double bronze bearing v-belt driven by electric motor. Guarded at one end for grinding open at other end for polishing. Comes with 6 x ½" grinding wheel, wire wheel, polishing wheel and cut-off wheel.

SHEAR—3" lever type shear. Capacity ¾" x ⅛" flat iron ⅛" round or suitable for notching or slitting sheet metal up to 14 gauge in steel aluminum or brass.

HAND TOOLS—consisting of fire tongs, Ball pein hammer, cut-off wheel, wire wheel, set of ¼", ⅜", ½" steel taps and drill bits to match, one routing high speed steel burr, tap wrench and round anvil for use in vise. Instruction manual with unit.

SPECIFICATIONS: 58½" high, 38" wide, 28" deep. Equipped with heavy duty ½ hp 110 volt single phase motor, cord, and plug to drive forge blower, grinder and drill press. Smoke pipe and exhaust blower extra if required. Shipping Wt. 240 lbs.



Champion PORTABLE BARBECUE BROILER GRILL



There's only One Champion
for better Barbecue

No unnecessary preparations to start the fire, simply roll up a piece of newspaper and light it. Pour on the charcoal and turn the crank on the blower. Within two minutes you will have a broiling fire, thus eliminating the necessity of using kindling wood, kerosene, or other items to start a charcoal fire. If you desire to sear the food in order to seal in the juices, simply turn the crank on the blower several times and the resulting hot fire will do the work. Otherwise, when the blower is not in operation, a steady uniform fire will burn in the hearth and cook the food to perfection.

Champion Barbecue Grills are equipped with a solid skirt or shield around the fire, so that no draft or breezes will blow the heat from under the cooking grill, thus saving charcoal and allowing the heat to be concentrated evenly all over the food on the grill.

Champion Barbecue Grills are equipped with a 18" x 9" hardwood carving table on which to prepare the meats. This hardwood table will not dull a knife as a metal table will and will not become scuffed, scarred, or rusty from knife marks.

The Champion Barbecue Grill is equipped with wheels so that it can be moved around the yard and taken indoors as desired. It is put together with wing nuts so that it can be easily disassembled and stowed away in small quarters. The entire unit is finished with heat-resisting aluminum paint. The blower produces a hot fire on a moment's notice and the crank is easily turned in either direction to produce the draft.

FISH AND BEEF—Fish, steaks, and roasts we recommend cooking directly on the grill with a moderately hot fire.

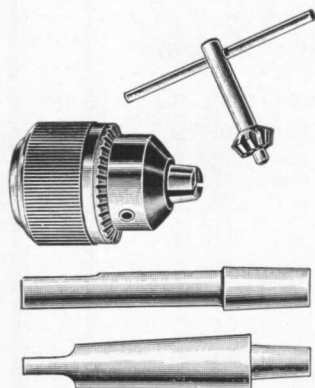
FOWL—Chickens and other fowl should be split in half and cooked with the inside or rib side towards the fire for approximately one-half hour after which turn the fowl over with the meat side down for 10 to 15 minutes. There is no need to go through the long laborious task of using a spit.

No. 3145-SW Champion Portable Barbecue Broiler Grill with rubber tired wheels and 22" diameter cooking grill weighs crated 68 pounds.

DOGGIES AND HAMBURGERS—Children like to cook their own doggie on a fork directly in the fire. Hamburgers must be started in a pan in order to prevent them from breaking up and can be put on the open grill to obtain the charcoal taste after cooking.

CORN—We recommend cooking corn in the husks directly on the grill covering it with a wet burlap and from time to time rewetting the burlap.

POTATOES—Potatoes should be laid around the edge of the hearth in the coal bed before starting the fire. They will then be gradually roasted directly in the fire.



CHAMPION ADJUSTABLE THREE-JAW GEARED CHUCK

No. 100

Takes straight shank bits from 0 to $\frac{1}{4}$ inch.

Jaws are hardened and each jaw works in unison with each other, thereby holding bits central.

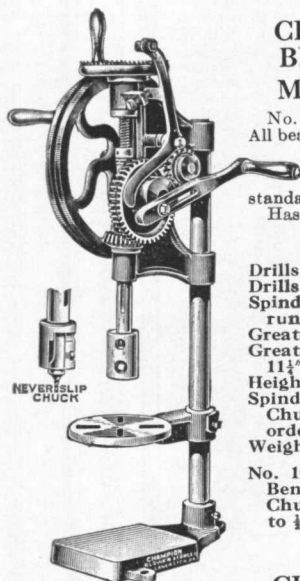
Diameter of Champion Chuck $2\frac{1}{2}$ inches; length over all $3\frac{1}{2}$ inches.

The taper hole in Champion Chuck can be fitted with any size arbor: $\frac{1}{2}$ inch, $\frac{3}{4}$ inch, or No. 1, No. 2, No. 3, or No. 4 Morse Taper, as ordered.

No. 100 Champion Three-Jaw Chuck, Weight, 1 lb.

Arbors $\frac{1}{2}$ -inch or $\frac{3}{4}$ -inch shank, as ordered.

Arbors to fit No. 1, No. 2, No. 3 or No. 4 Morse Taper, as ordered.



CHAMPION SELF-FEED BENCH DRILL NO. 104

Made with Ball Bearings

No. 104 Bench Drill is unusually low priced. All bearings ground out of the solid metal. Has lathe-turned and slotted table. Champion Drills are all machine-jigged, therefore all parts are absolutely standard and interchangeable.

Has two speeds for hand drilling.

SPECIFICATIONS

Drills to center of 12" circle.
Drills holes from 0 to $\frac{1}{4}$ ".
Spindle, $\frac{1}{2}$ " in diameter; has up-and-down run of 3 inches.
Greatest distance from table to spindle, $7\frac{1}{4}$ ".
Greatest distance from spindle to base, $11\frac{1}{4}$ ".

Height over-all, 32 inches.
Spindle bored like Champion Never-Slip Chuck, for $\frac{1}{2}$ " shank drill bits; if specially ordered, to take $\frac{3}{4}$ " shank bits.
Weight, 70 lbs. Code—Fecond.

No. 104C Bench Drill, same as No. 104 Bench Drill, except equipped with 3-Jaw Chuck, taking straight shank bits up to $\frac{1}{2}$ inch. Code—Fecondait.

CHAMPION SELF-FEED POST DRILL No. 108

Made with Ball Bearings

No. 108 Champion Post Drill is a low-priced, light-weight Drill, with moderate capacity.

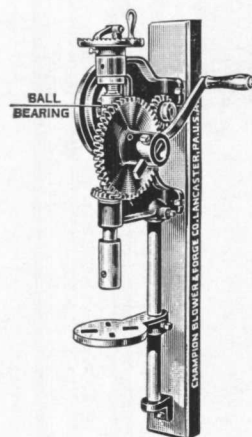
Spindle has end-thrust Ball Bearings, which save 50% in power.

Has adjustable one-piece, slotted Table, which may be raised or lowered seven inches.

Flywheel $6\frac{1}{4}$ inches in diameter with $1\frac{1}{2}$ inch face; grooved to take a V-belt; also can be used with a $1\frac{1}{4}$ inch flat belt.
Has Adjustable Crank—one revolution of which makes three revolutions of the fly wheel.

SPECIFICATIONS

Drills to center of 8" circle.
Drills from 0 to $\frac{1}{4}$ -inch.
Spindle $\frac{1}{2}$ -inch in diameter, has up-and-down run of $1\frac{1}{4}$ ".
Greatest distance from Table to spindle 8".
Height of drill 26 inches.
Spindle bored to take $\frac{1}{2}$ " straight shank drill bits if specially ordered, to take $\frac{3}{4}$ ".
Weight, 29 lbs. Code—Fasque.



CHAMPION SELF-FEED POST DRILL NO. 103

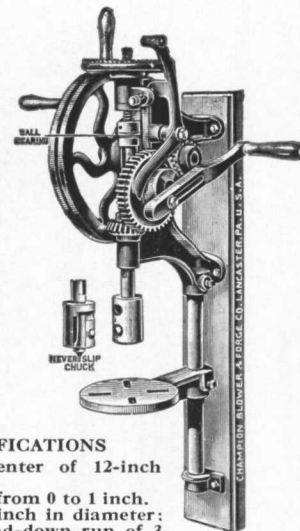
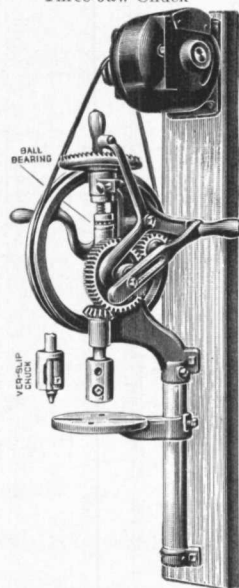
Made with Ball Bearings

No. 103 Champion Post Drill is the lowest priced Back-Geared Self-Feed Post Drill built. Spindle has end-thrust ball bearings which save 50% in power, and are made from the highest grade lathe-turned Tool Steel.

It has lathe-turned and slotted table. Champion Drills are all machine-jigged, therefore, all parts are standard and interchangeable.

Has two speeds for hand drilling.

No. 1000 Utility Drill is a low-priced, Back-Geared, Self-Feed Post Drill same as No. 103 Drill described above, equipped with an Adjustable Three-Jaw Chuck



SPECIFICATIONS

Drills to center of 12-inch circle.
Drills holes from 0 to 1 inch.
Spindle, $\frac{3}{8}$ inch in diameter; has up-and-down run of 3 inches.
Greatest distance from table to spindle, $8\frac{3}{4}$ inches.
Height of drill, 31". Spindle bored like Champion Never-Slip Chuck to take $\frac{1}{2}$ -inch straight shank drill bits; if specially ordered, to take $\frac{3}{4}$ -inch.
Weight, 60 lbs. Code—Fascher.

CHAMPION SELF-FEED MOTOR DRIVEN POST DRILL

No. 110

Made with Ball Bearings

No. 110 Champion Motor Driven Post Drill is same as No. 103 Drill described above with $\frac{1}{4}$ HP Electric Motor 110 volt A.C. and V Belt in one complete unit as illustrated. Weight, 85 lbs. Code—Fabinto.

CHAMPION SELF-FEED POST DRILL No. 98 and No. 101

Made with Ball Bearings

No. 98 and 101 Champion Post Drill has two speeds for hand drilling.

Spindle has End Thrust Ball Bearings.

It has lathe-turned and slotted table. Champion Drills are all machine-jigged, therefore all parts are absolutely standard and interchangeable.

End Thrust Ball Bearings save 50 per cent in power and are made from the highest grade of lathe-turned tool steel.

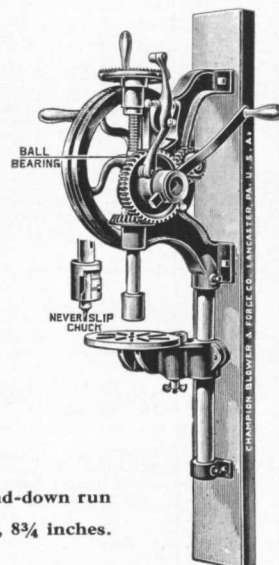
Spindle bored like Champion Never-Slip Chuck to take $\frac{1}{2}$ -inch Straight Shank Drill Bits. If especially ordered, to take $\frac{3}{4}$ inch.

SPECIFICATIONS NO. 98

Drills to the center of a 14-inch circle.
Drills from 0 to $1\frac{1}{4}$ -inch hole.
Spindle, 1 inch in diameter; has up-and-down run of 3 inches.
Greatest distance from table to spindle, 10 inches. Height of drill, 40 inches.
Weight, 95 lbs. Code—Fearless.

SPECIFICATIONS NO. 101

Drills to the center of 12-inch circle.
Drills from 0 to 1-inch hole.
Spindle, $\frac{3}{4}$ inch in diameter has up-and-down run of 3 inches.
Greatest distance from table to spindle, $8\frac{3}{4}$ inches.
Height of drill, 35 inches.
Weight, 75 lbs. Code—Fesapo.



ABOVE DRILLS FURNISHED WITH A TURNED FLY WHEEL FOR V OR FLATBELT FOR POWER



CHAMPION SELF-FEED POST DRILL NO. 93½ and No. 90

Made with Ball Bearings. Has two speeds for hand drilling

No. 93½ and No. 90 Champion Self-Feed Post Drills are high grade back geared Drills.

They have two speeds.

Spindle has End Thrust Ball Bearings.

All Bearings are ground out of the solid metal.

No Babbitt used on this Drill.

The End Thrust Ball Bearings save 50 per cent in power and are made from the highest grade of lathe-turned tool steel.

Has Automatic Self-Feed.

It has lathe-turned and slotted table.

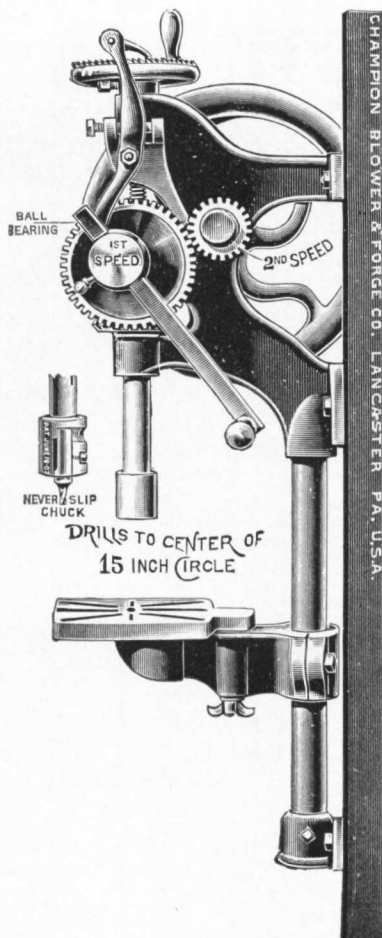
Champion Drills are all machine-jigged, therefore all parts are absolutely standard and interchangeable.

SPECIFICATIONS NO. 93½

Drills to the center of a 15-inch circle.
Drills from 0 to 1¼-inch hole.
Spindle 1½ inches in diameter; has up-and-down run of 3 inches.
Greatest distance from table to spindle, 10 inches. Height of drill, 46 inches.
Spindle bored like Champion Never-Slip Chuck to take in ½-inch Straight Shank Drill Bits. If especially ordered, to take ¾ inch.
Weight, 110 lbs. Code—February.

SPECIFICATIONS NO. 90

Drills to the center of a 14½-inch circle.
Drills from 0 to 1¼-inch hole.
Spindle, 1½ inches in diameter has up-and-down run of 3 inches.
Greatest distance from table to spindle, 10 inches. Height of drill, 43 inches.
Spindle bored like Champion Never-Slip Chuck to take in ½-inch Straight Shank Drill Bits. If especially ordered, to take ¾ inch.
Weight, 100 lbs. Code—Febrile.



CHAMPION THREE-GEARED SELF-FEED POST DRILL NO. 95, No. 96 and No. 4

Made with Ball Bearings

No. 95, No. 96 and No. 4 Champion Self-Feed Three-Geared Ball Bearing Post Drills are stocky in design. Have three gears to give second speed same turning direction of the crank as the first speed.

All Bearings are ground out of the solid metal.

No Babbitt used on the Drills.

The End Thrust Ball Bearings save 50% in power and are made from the highest grade of lathe-turned tool steel.

Have Automatic Self-Feed.

Lathe-turned and slotted table.

Champion Drills are all machine-jigged, therefore all parts are absolutely standard and interchangeable.

No. 96 Champion Automatic Quick-Return Self-Feed Post Drill stands without a rival in its class in the markets of today.

The Quick-Return Lever is thrown into place while the Drill continues in motion, where it remains until the bit is raised out of the work and automatically stops.

SPECIFICATIONS NO. 95

Drills to the center of a 16-inch circle.
Drills from 0 to 1¼-inch hole.

Spindle 1½ inches in diameter; has up-and-down run of 3 inches.

Greatest distance from table to spindle 10 inches. Height of drill, 46 inches.

Spindle bored like Champion Never-Slip Chuck to take in ½-inch Straight Shank Drill Bits. If especially ordered, to take ¾ inch.

Weight, 110 lbs. Code—Feenland.

SPECIFICATIONS NO. 96

Drills to the center of a 15½-inch circle.
Drills holes from 0 to 1½ inches.

Spindle 1½ inches in diameter; has up-and-down run of 3 inches.

Greatest distance from table to spindle 9¾ inches. Height of drill, 46 inches.

Spindle bored like Champion Never-Slip Chuck to take in ½-inch Straight Shank Drill Bits. If especially ordered, to take ¾ inch.

Weight, 135 lbs. Code—Feather.

SPECIFICATIONS NO. 4

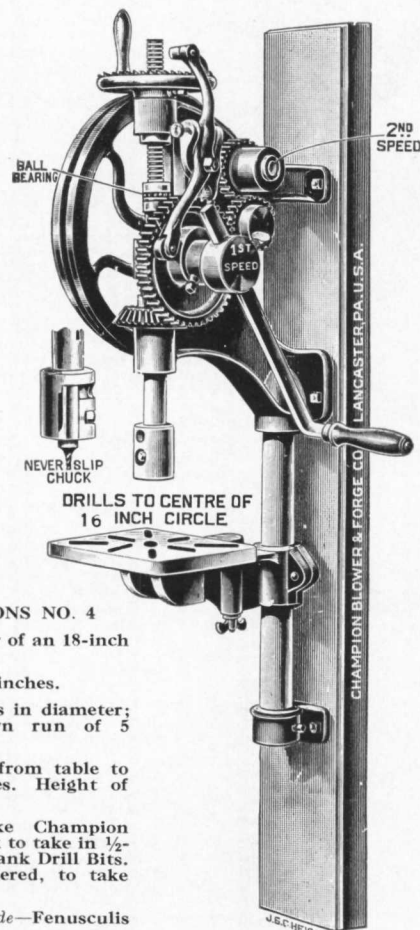
Drills to the center of an 18-inch circle.
Drills from 0 to 1½ inches.

Spindle 1¼ inches in diameter; has up-and-down run of 5 inches.

Greatest distance from table to spindle 15 inches. Height of drill, 54 inches.

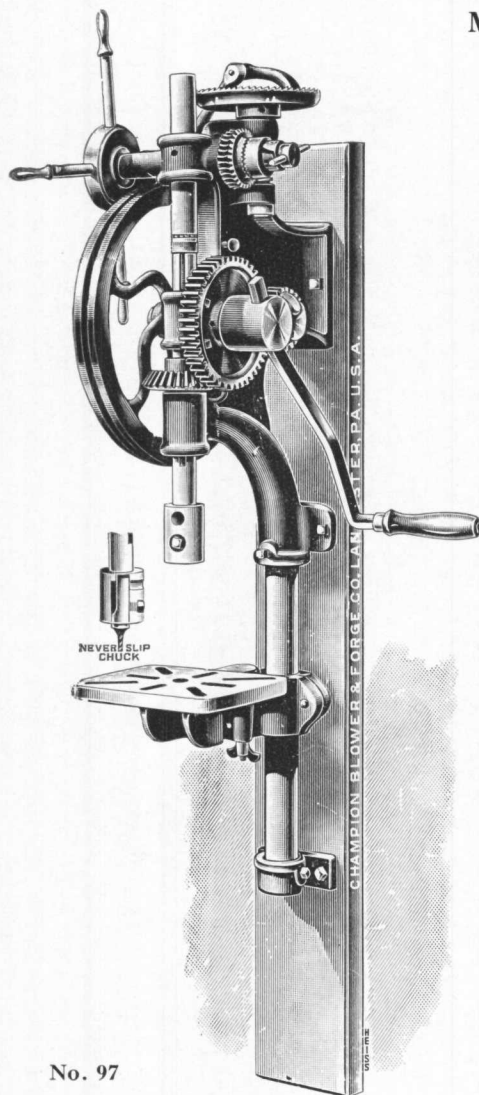
Spindle bored like Champion Never-Slip Chuck to take in ½-inch Straight Shank Drill Bits. If especially ordered, to take ¾ inch.

Weight, 200 lbs. Code—Fenusculus



ABOVE DRILLS FURNISHED WITH A TURNED FLY WHEEL FOR V OR FLAT BELT FOR POWER

CHAMPION HAND-FEED AND QUICK-RETURN SELF-FEED POST DRILLS MADE WITH BALL BEARINGS



No. 97

No. 97 Champion Self-Feed and Hand-Feed Quick-Return Drill on both speeds has the Propeller Wheel Hand-Feed and Self-Feed independent of each other and for quick work the hand-feed acts as the quick return for the Drill Bit.

A capital drill for garages and battery service stations.

The End Thrust Ball Bearings save 50 per cent in power.

It has three gears, giving second speed same turning direction as first.

It has lathe-turned and slotted table.

It is furnished with a turned fly wheel for V or Flat Belt for Power.

SPECIFICATIONS

Drills to the center of 17-inch circle.

Drills holes from 0 to 1 1/4 inches.

Spindle, 1 1/2 inches in diameter; has up-and-down run of 5 1/2 inches.

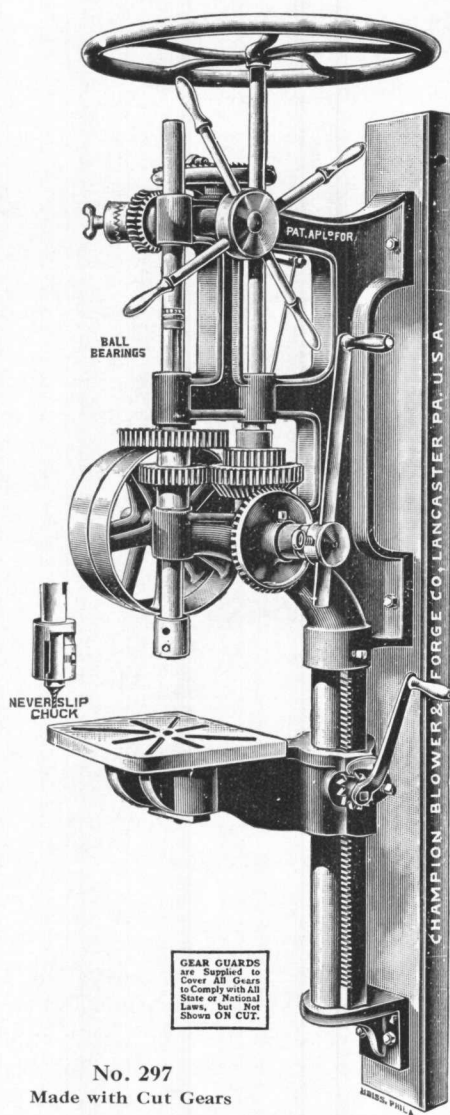
Greatest distance from table to spindle, 12 1/2 inches. Height of drill, 50 inches.

Spindle bored like Champion Never-Slip

Chuck to take in 1/2-inch Straight Shank

Drill Bits. If especially ordered, to take

3/4-inch. Weight, 165 lbs. Code—Fease.



No. 297

Made with Cut Gears

Nos. 297 and 397 Champion Self-Feed and Hand-Feed Quick-Return Drills represent a large and powerful Drill, equipped with both self-feed and hand-feed. The Propeller Wheel Hand-Feed and Self-Feed are independent of each other. The hand-feed acts as a quick return for the drill bit. The Upright Fly-Wheel Shaft runs on frictionless End Thrust Ball Bearings on its lower end, and is supplied with a heavy fly-wheel for keeping up momentum. It has double Back Cut Gears with two speeds, and to change from fast to slow is accomplished by sliding the cut gears. The Table is raised and lowered by a Rack and can be turned back out of the way. It has End Thrust Ball Bearings which save 50 per cent, in power. It has lathe-turned and slotted table

SPECIFICATIONS NO. 297

Spindle, 1 1/4 inches in diameter; has up-and-down run of 9 inches. Drills holes up to 1 1/2 inches.

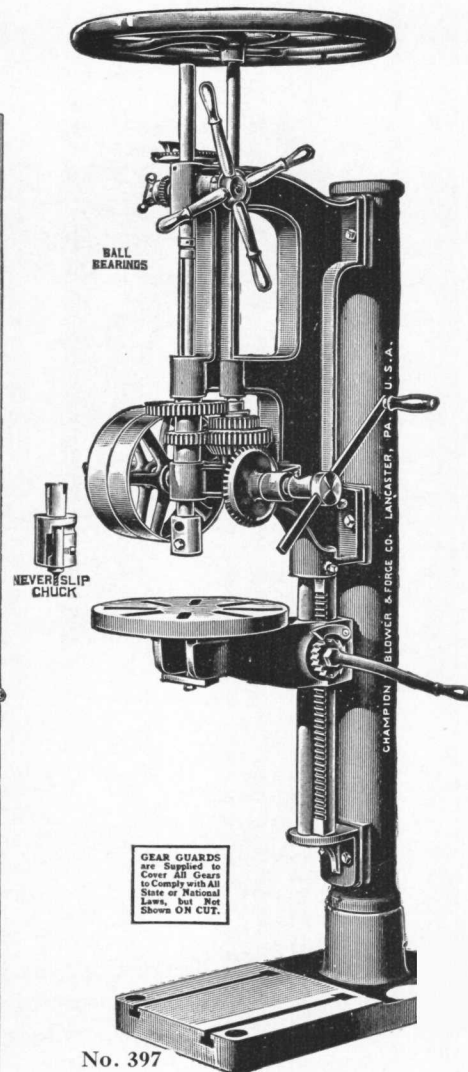
Greatest distance from table to spindle, 19 inches. Height of drill, 72 inches.

Spindle bored like Champion Never-Slip Chuck to take 3/4-inch Straight Shank Bits. If especially ordered, to take 1/2-inch.

Drills to the center of a 24-inch circle.

Weight, 425 lbs. Code—Fide.

No. 297P Drill, with Tight and Loose Pulleys, 11 inch Diameter and 2 1/2-inch Face, for Hand and Power Combined. Speed, 80 R.P.M. Weight, 435 lbs. Code—Fibit.



No. 397

Made with Cut Gears

SPECIFICATIONS NO. 397

Spindle, 1 1/4 inches in diameter; has up-and-down run of 9 inches. Drills holes up to 1 1/2 inches.

Greatest distance from table to spindle, 19 inches. Height of drill, 72 inches.

Spindle bored like Champion Never-Slip Chuck to take 3/4-inch Straight Shank Bits. If especially ordered, to take 1/2-inch.

Drills to the center of a 24-inch circle.

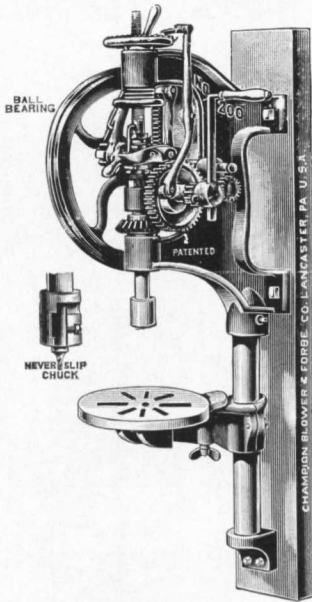
Weight, 760 lbs. Code—Fride.

No. 397P Drill, with Tight and Loose Pulleys 11 inch Diameter and 2 1/2-inch Face, for Hand and Power Combined. Speed, 80 R.P.M. Weight, 785 lbs. Code—Fribit.

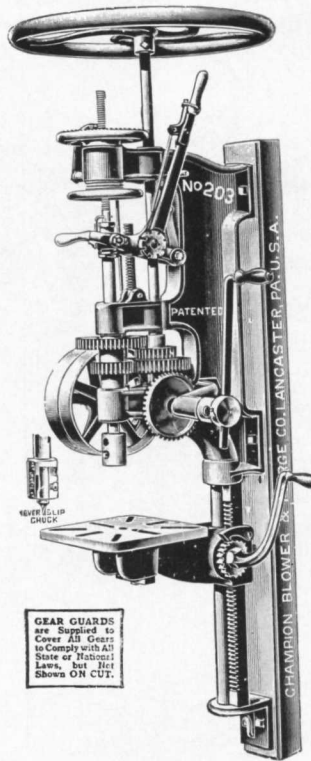


CHAMPION COMBINATION AUTOMATIC SELF-FEED AND DOUBLE COMPOUND LEVER-FEED DRILLS

MADE WITH BALL BEARINGS

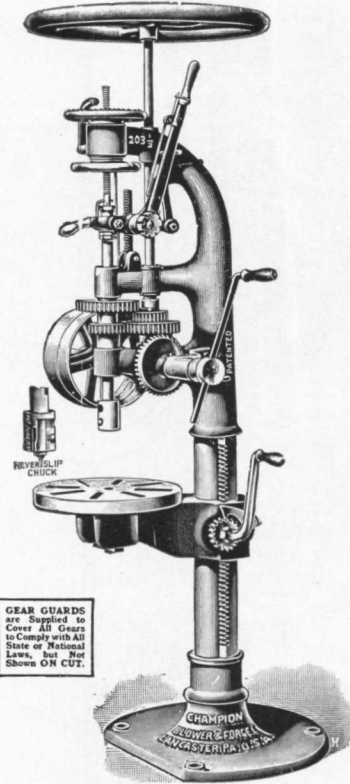


No. 200



No. 203

Made with Cut Gears



No. 203 1/2

Made with Cut Gears

The above line of Combination Automatic Self Feed and Double Compound Lever Feed Drills produces 80% more pressure at the point of drill bit than any other Drills. The Self Feed and Lever Feed are both independent of each other and are changed from one to the other in a fraction of a second. With either feed the Drill Spindle has instantaneous return of the Drill bit out of the hole drilled and again returned to the material for the next hole. They have two speeds, lever specially convenient for wood boring.

201, 203, 203 Elec., 203 1/2, 203 1/2 Elec. Drills all have Rack and Pinion to raise and lower the tables.

| | Capacity | Circle Center | Up & Down Run | Distance Table to Spindle | Dia. Spindle | Height Drill | Spindle hole | H.P. | Weight | Code |
|---------------|----------|---------------|---------------|------------------------------|--------------|--------------|--------------|------|--------|------------|
| 200 | 1 1/4 | 16 | 4 | 11 | 1 1/4 | 51" | 1/2 | | 195 | Faldfee |
| 200 1/2 | 1 1/2 | 18 | 4 | 12 | 1 1/4 | 55" | 1/2 | | 260 | Falucha |
| 201 | 1 1/2 | 21 | 5 1/2 | 17 | 1 1/4 | 68" | 1/2 | | 405 | Faldstool |
| 203 | 1 1/2 | 21 | 5 1/2 | 19 | 1 1/4 | 72" | 3/4 | | 435 | Falisa |
| 203 Elec. | 1 1/2 | 21 | 5 1/2 | 19 | 1 1/4 | 72" | 3/4 | 1/2 | 665 | Faedera |
| 203 1/2 | 1 1/2 | 21 | 5 1/2 | 20 | 1 1/4 | 80" | 3/4 | | 625 | Faltasinha |
| 203 1/2 Elec. | 1 1/2 | 21 | 5 1/2 | 20 | 1 1/4 | 80" | 3/4 | 1/2 | 740 | Fapelar |

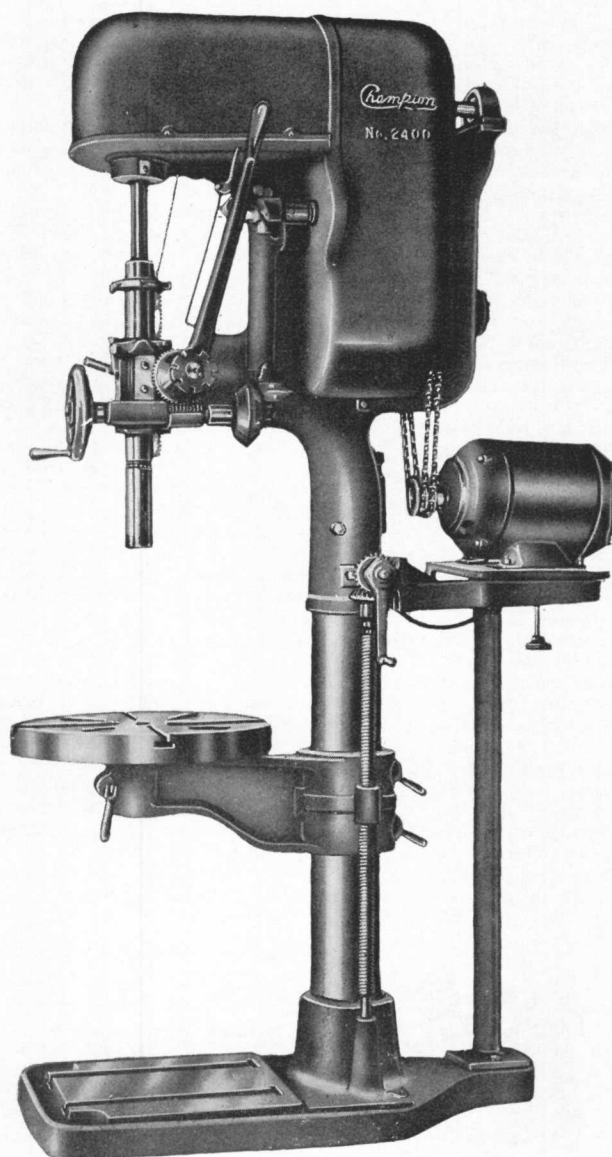
Extra for tight & loose pulleys.



CHAMPION No. 2400 24-INCH BALL-BEARING BACK-GEARED UPRIGHT POWER DRILL WITH LEVER, WHEEL, POWER FEED AND AUTOMATIC STOP

Champion new No. 2400 Ball-Bearing Back-Geared Floor Drill is accurate ball bearing throughout for all around light, medium and heavy work up to $1\frac{1}{2}$ " capacity. V Belt Drive for any make 1750 RPM Motor. Gear and Pinions are cut scientifically accurate running quiet at all speeds—25 to 680 RPM with 3 speeds on Power Feed. V Belt Driven fully guarded but easily accessible to change speeds.

Automatic stop can be set to feed spindle fast, medium or slow to any determined depth. Lever Feed, Wheel or Power Feed changed instantly for general all around drilling from small to largest hole. Table and base are accurately machined with T Slots in both table and base. We recommend this drill as an accurate all around general purpose ball bearing drill for smallest to $1\frac{1}{2}$ " capacity.



SPECIFICATIONS

Height of Drill, 79"
Distance between table and spindle, $28\frac{1}{2}$ "
Distance between spindle and base, 44"
Distance from column to center of spindle, $12\frac{1}{4}$ "
Diameter of Column, $5\frac{1}{4}$ "
Travel of Table on Column, 21"
Diameter of Table, $18\frac{3}{4}$ "
Eight Spindle Speeds
direct 130-220-390-680
Back gears 25-45-72-120
Diameter of Spindle, $1\frac{1}{4}$ "

Traverse of Spindle, 12"
The Power Feed per revolution of spindle for various steps on Power Feed .002, .005, .008
Hole in Spindle to fit standard No. 4 Morse Taper
Floor Space required, $18\frac{1}{2}$ " x 36"
Horsepower required, $1\frac{1}{2}$ H.P.
Weight, 1250 lbs.
No. 2400 with V Double Belt Drive with $1\frac{1}{2}$ H.P. Motor current and voltage as ordered.
Can be furnished less Motor with 2 V Belts and Motor Pulleys—any bore to fit your Motor.
Champion No. 2400 Drill can be furnished with Positive Gear Feed if so ordered.

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CHAMPION 2200 BACK-GEARED UPRIGHT V-BELT POWER DRILL WITH LEVER, WHEEL, POWER FEED AND AUTOMATIC STOP

THE NEW IMPROVED CHAMPION 2200 BACK-GEARED POWER DRILL COMPLETELY V-BELT DRIVEN THROUGH-OUT combines all modern features in many ways excels the higher-priced drills. Constructed to withstand heavy work, as well as light, rapid drilling. Built to take in wide range of work, making it the best all-round machine shop, manufacturing or garage drill on the market for general work.

The crown gear $6\frac{7}{8}$ inches in diameter and 4-inch diameter pinion are larger and heavier than usually found on drills of this size, and all gears are generated scientifically accurate, insuring silent running and long life.

The spindle is carbon steel, ground to a micrometer fit, graduated and equipped with frictionless ball bearings. In addition to ball bearings in the spindle thrust, this drill has ball bearing under the crown gear. These thrust ball bearings all equipped with retainers, packed with grease, that keep the walls automatically oiled three months, and with the bronze bushing in the head will outwear any other drill on the market.

The drill base is bored out and the column pressed in, accurately aligning the base with the spindle. The table is aligned perfectly with the spindle and the table arm is clamped with two clamps, insuring a rigid table, so accurate work can be done.

The drill is completely v-belt driven—from motor to countershaft are dual v-belts. Between countershaft and top drive shaft are a pair of 4 step heavy duty v-belt pulleys. Power feed is v-belt driven with quick change attachment.

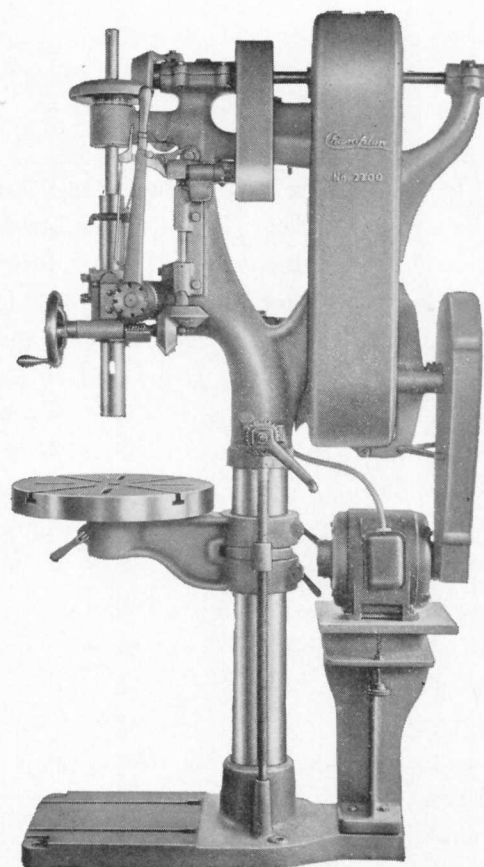
The top bearing is 7 inches long and constructed so that wear can be taken up when necessary. The lower v-belt pulley bearings are bronze—another exclusive Champion feature.

Has three feeds—lever feed, wheel feed and power feed, with three speeds on the power feed, eight spindle speeds—changed from plain drill to back-geared drill by merely sliding the back gears in with lever attached.

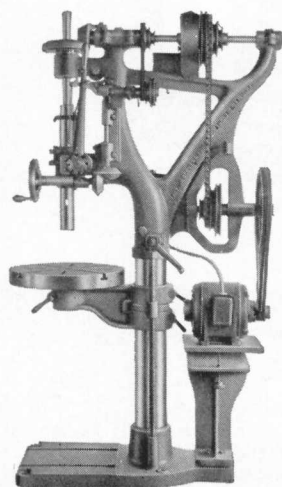
The automatic stop will knock off the power feed at any desired depth; the spindle being graduated so that any hole 12 inches deep down to any fraction of an inch can be drilled without measuring the depth of the hole.

Quick-return handle gives rapid movement to the spindle. The spindle is counterbalanced with weight in hollow column, connected by cable chain all enclosed. Has quick-acting screw to raise and lower the table. The gears are covered with guards and worm gear on power feed runs in a continuous bath of oil.

This drill is adapted for automobile repair shops as it will rebore automobile or tractor cylinder with one setting of the motor.



Complete with guards



Without guards

SPECIFICATIONS

Back Geared, Power Feed and Automatic Stop.

Swings to center of 22-inch circle.

Height of drill, 77 inches.

Column diameter, $5\frac{1}{4}$ inches.

Table diameter, 18 inches.

Vertical travel on column, 21 inches.

Spindle diameter in sleeve, $1\frac{7}{16}$ inches.

Spindle travel, 12 inches.

Eight Spindle Speeds—405, 235, 138, 80, 73, 42, 25, 15 R.P.M.

Distance between table and spindle, $27\frac{3}{4}$ inches.

Distance between spindle and base, 43 inches.

Distance from column to center of spindle, 11 inches.

Power Feeds per revolution of spindle for various belt steps on power feed .002, .005, .008.

Hole in spindle bored to fit No. 4 Morse Taper.

Base has T slots.

Three distinct complete feeds—power feed, wheel feed and lever feed.

2200 Electric V-Belt Drive Drill with 1 H.P. Motor current and voltage as ordered. Weight 1150 lbs. Code: Figilnose.

Can be furnished less Motor with 2 V-Belts and double V Motor Pulley, any bore to suit your Motor.

Spindle speeds—8 with use of back gears.

Capacity—drills 0 to $1\frac{1}{2}$ inches.

Diameter of crown gear, $6\frac{7}{8}$ inches.

Diameter of bevel pinion, 4 inches.

Pitch of crown gear and pinion gear, 6. Crown gear, 40 teeth. Pinion gear, 21 teeth.

Bearings split on upper shaft are 7 inches long.

Phosphor bronze bearings in head.

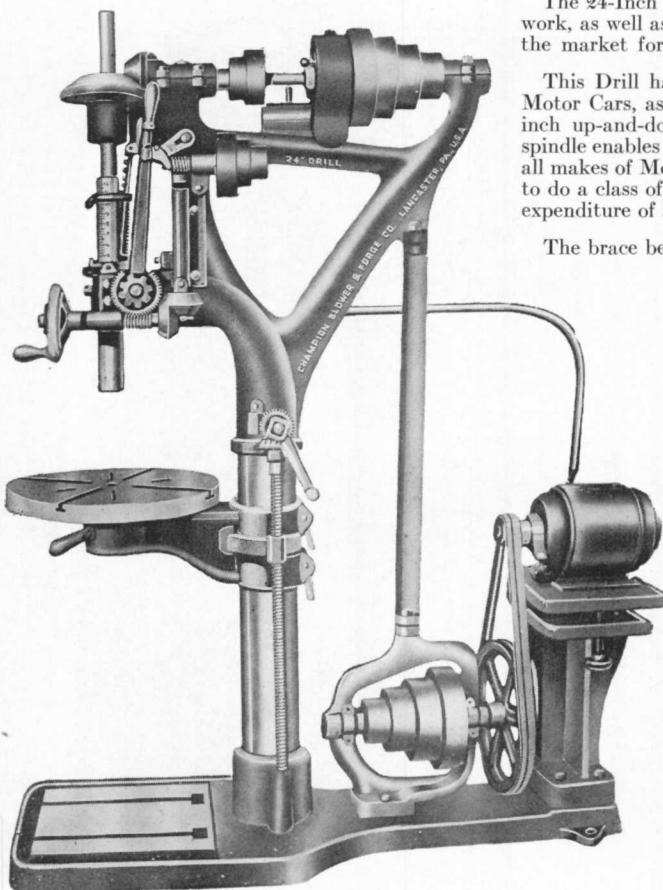
Floor space, 16 x 46 inches.

H.P. required—1 H.P.

Champion 2200 Back-Geared Upright Power Drill can be furnished with Positive Gear Feed if so ordered



CHAMPION 24-INCH BACK-GEARED UPRIGHT POWER DRILL WITH LEVER, WHEEL, POWER FEED AND AUTOMATIC STOP



V-Belt Motor Driven

The 24-Inch Back-Geared Power Drill is constructed to withstand heavy work, as well as light and rapid drilling, making the best all-round drill on the market for general repair or manufacturing purposes.

This Drill has been especially designed for reboring cylinders on Ford Motor Cars, as well as Fordson Tractor cylinders, as the spindle has a 12-inch up-and-down run, and with this exceptionally long traverse of the spindle enables the user to rebores cylinders from top to bottom of practically all makes of Motor Car Cylinders on one setting, thus enabling the operator to do a class of work which heretofore required a 25-inch Drill, meaning an expenditure of almost double the cost of this Drill.

The brace being placed between the center of cone pulleys makes a rigid connection from top of drill to base, eliminating vibration.

The Crown Gear runs in a Phosphor Bronze Bushing of the highest grade, and the Crown Gear is also equipped with an End Thrust Ball Bearing, which reduces the friction and eliminates the wearing of upper end of Crown Gear Bearing, thus insuring easier running and durability.

The Spindle is graduated and is ground to a micrometer fit and equipped with frictionless ball bearings. All Gears are machine cut scientifically accurate, which insures silent running and long life. The long split bearings on top of horizontal shaft allow for taking up wear when necessary. The Drill is made with Planed Square Base, having T slots to enable heavy work to be held firmly to base. The base is constructed with a pocket on each side and front to retain oil or drippings from tool lubrication. The lower cone pulley bearings are equipped with ring oilers—another exclusive Champion feature.

The change from plain to back-geared Drill is done in an instant by a movement of the eccentric shaft.

Has eight speeds with three distinct and complete feeds: Power Feed, Hand Wheel Feed and Lever Feed. Has Automatic Stop with quick-return lever giving rapid movement to Spindle. Spindle is counterbalanced by special cable chain attached to weight in column. Has quick-acting screw for raising and lowering table. Drills with perfect accuracy from smallest holes up to 1 1/2-inch.

SPECIFICATIONS

Height of drill, 76 inches.

Distance between table and spindle, 27 1/2 inches.

Distance from spindle and base, 43 inches.
Distance from column to center of spindle, 12 1/4 inches.

Diameter of column, 5 1/4 inches.

Traverse of table on column, 21 inches.

Diameter of table, 18 inches.

24" Electric V-belt drive with 1 H.P. Motor current and voltage as ordered. Weight 1190 lbs. Code: Fiedmas.

Can be furnished less Motor with 2 V Belts and Double V Motor Pulley any bore to suit your Motor.

Can be furnished Electric Gear Driven if preferred to V-Belt Drive. Weight 1200 lbs. with Motor. Code: Finjan.

Champion 24-inch Back-Geared Upright Power Drill can be furnished with Positive Gear feed if so ordered.

24" Back-Geared Belt Driven Drill with tight and loose pulleys 8" x 2 3/4" to run at 300 R.P.M. as illustrated. Weight 1025 lbs. Code: Figad.

Eight Spindle Speeds—405, 235, 138, 80, 73, 42, 25, 15 R.P.M.

Diameter of spindle, 1 1/4 inches.

Traverse of spindle, 12 inches.

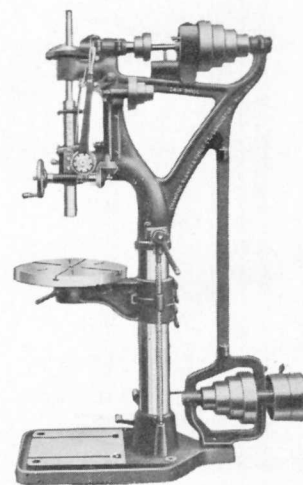
The Power Feeds per revolution of spindle for the various steps on power feed, .002, .005, .008.

Hole in spindle bored to fit Morse Taper No. 4.

Size of cone pulleys (4-step), 4, 5 3/4, 7 1/2, 9 x 2 in. face.

Floor space required, 19 1/2 x 47 inches.

Horse Power required, 1.



Belt Driven



CHAMPION 21-INCH BACK-GEARED UPRIGHT POWER DRILL WITH LEVER, WHEEL, POWER FEED AND AUTOMATIC STOP

THE NEW IMPROVED CHAMPION 21-INCH BACK-GEARED POWER DRILL combines all modern features, in many ways excels the higher-priced drills. Constructed to withstand heavy work, as well as light, rapid drilling. Built to take in wide range of work, making it the best all-round machine shop, manufacturing or garage drill on the market for general work.

The crown gear $6\frac{7}{8}$ inches in diameter and 4-inch diameter pinion are larger and heavier than usually found on drills of this size, and all gears are generated scientifically accurate, insuring silent running and long life.

The spindle is carbon steel, ground to a micrometer fit, graduated and equipped with frictionless ball bearings. In addition to ball bearings in the spindle thrust, this drill has ball bearing under the crown gear. These thrust ball bearings all equipped with retainers, packed with grease, that keep the walls automatically oiled three months, and with the bronze bushing in the head will outwear any other drill on the market.

The drill base is bored out and the column pressed in, accurately aligning the base with the spindle. The table is aligned perfectly with the spindle and the table arm is clamped with two clamps, insuring a rigid table, so accurate work can be done.

The brace between the top and bottom countershaft stiffens the drill, so that when the heaviest work is done, both the upper and lower cone pulleys are held rigidly in position.

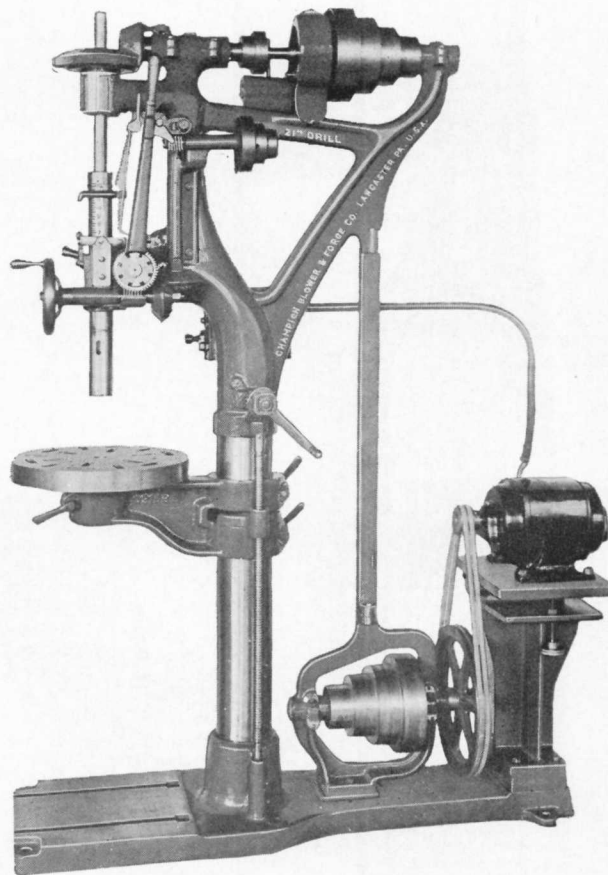
The top bearing is 7 inches long and constructed so that wear can be taken up when necessary. The lower cone pulley bearings are equipped with ring oilers—another exclusive Champion feature.

Has three feeds—lever feed, wheel feed and power feed, with three speeds on the power feed, eight spindle speeds—changed from plain drill to back-geared drill by merely sliding the back gears in with lever attached.

The automatic stop will knock off the power feed at any desired depth; the spindle being graduated so that any hole 12 inches deep down to any fraction of an inch can be drilled without measuring the depth of the hole.

Quick-return handle gives rapid movement to the spindle. The spindle is counterbalanced with weight in hollow column, connected by cable chain all enclosed. Has quick-acting screw to raise and lower the table. The gears are covered with guards and worm gear on power feed runs in a continuous bath of oil.

This drill is adapted for automobile repair shops as it will rebore automobile or tractor cylinder with one setting of the motor.



V-Belt Motor Driven

SPECIFICATIONS

Back Geared, Power Feed and Automatic Stop.
Swings to center of 21½-inch circle.
Height of drill, 77 inches.
Column diameter, 5¼ inches.
Table diameter, 18 inches.
Vertical travel on column, 21 inches.
Spindle diameter in sleeve, 1⅛ inches.
Spindle travel, 12 inches.
Eight Spindle Speeds—405, 235, 138, 80, 73, 42, 25, 15 R.P.M.
Distance between table and spindle, 27¾ inches.
Distance between spindle and base, 43 inches.
Distance from column to center of spindle, 10¾ inches.
Power Feeds per revolution of spindle for various cone steps on power feed .002, .005, .008.
Size of cone pulleys (4-step) 4, 5¾, 7½, 9 x 2-inch face.
Hole in spindle bored to fit No. 4 Morse Taper Base has T slots.
Three distinct complete feeds—power feed, wheel feed and lever feed.

21" Electric V Belt Drive Drill with 1 H.P. Motor current and voltage as ordered. Weight 1150 lbs. Code: Figlinos.

Can be furnished less Motor with 2 V-belts and double V Motor Pulley, any bore to suit your Motor.

Can be furnished Electric Gear Driven if preferred to V Belt Drive. Weight 1150 lbs. Code: Finiront.

21" Back-Geared Belt Driven Drill with tight and loose pulleys 8" x 2¾" to run at 300 R.P.M. as illustrated. Weight 950 lbs. Code: Figlin.

Spindle speeds—8 with use of back gears.

Capacity—drills 0 to 1½ inches.

Diameter of crown gear, 6⅞ inches.

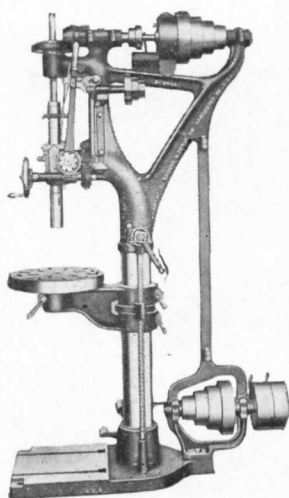
Diameter of bevel pinion, 4 inches.

Pitch of crown gear and pinion gear, 6. Crown gear, 40 teeth. Pinion gear, 21 teeth.

Bearings split on upper shaft are 7 inches long. Phosphor bronze bearings in head.

Floor space, 16 x 46 inches.

H.P. required—1 H.P.



Belt Driven

Champion 21-inch Back-Geared Upright Power Drill can be furnished with Positive Gear Feed if so ordered

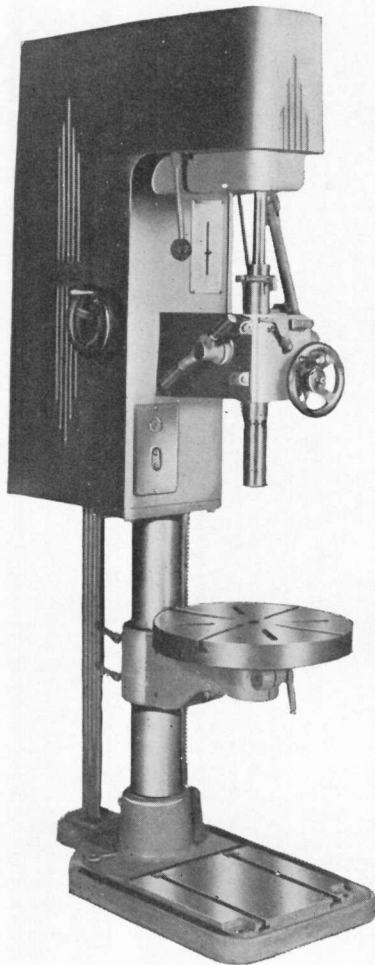


CHAMPION No. 2100 BACK-GEARED UPRIGHT ELECTRIC DRILL WITH LEVER, WHEEL POWER FEED AND AUTOMATIC STOP

THE MODERN CHAMPION 21-INCH BACK-GEARED ELECTRIC DRILL combines all the up-to-date features incorporated in the highest price drills and represents one of the most improved 21" drill presses on the American market. This drill is constructed to withstand the heaviest type of working as well as light and rapid drilling. Therefore, it is the best all round drill press for machine shop, tool room, general manufacturing use on the market.

The Crown Gear and pinion are larger and heavier than usually used on drills of this size. All gears are scientifically and accurately cut for quiet running and long life.

Spindle is carbon steel ground to micrometer fit, graduated and equipped with ball thrust bearings.



The Crown Gear runs on ball bearings and in a phosphor bronze bushing at the head of the drill. The drill throughout is equipped with high grade bearings designed for long life. The main bearings are split so adjustment can be made to take up wear.

This Drill is equipped with three distinct power feeds either through changing a V-belt or through positive gear reduction changed by manual lever.

Spindle has three distinct feeds—either power, lever or wheel feed. The power feed is automatically disengaged by a disengaging collar on the spindle which can be set to the desired drilling depth.

The drill is also equipped with a variable speed device operating by hand wheel giving an infinite number of spindle speeds from 25 R.P.M. to 535 R.P.M.

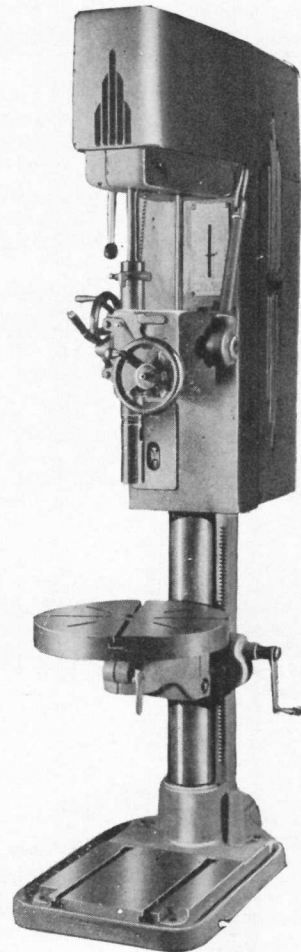
These speeds are indicated by an easily visible automatic pointer which points directly to the speed marked plainly on a large name plate in front of the operator's eyes. This complete range of speeds beside using the hand wheel is obtained by use of the back gear lever which when engaged produces the lower half of the speed range indicated on the name plate and when disengaged, produces the upper half.

The table has T slots as well as holes for clamping the work. Table is run up and down the drill column by means of a crank geared to a steel rack through a pair of reduction gears which makes lowering and raising very easy. Table and table arm are also provided with 3 clamps which will lock it in any position.

A large well-balanced heavy floor base is provided with T slots and an oil groove.

The motor is controlled by push button station with overload protection mounted on the face of the drill back, easily accessible to the operator.

This drill represents the latest modern streamline development with all operating controls and levers easily accessible to the operator and all working parts enclosed for safety and protection against dirt and dust.



SPECIFICATIONS

Swings to center of 21 1/2 inch circle.
Height of drill, 82 5/8 inches.
Column diameter, 5 1/4 inches.
Table diameter, 18 1/2 inches.
Vertical travel on column, 21 inches.
Spindle diameter in sleeve, 1 1/8 inches.
Spindle travel, 9 3/4 inches.
Distance between table and spindle, 27 3/4 inches.
Distance between spindle and base, 43 inches.

Distance from column to center of spindle, 10 3/4 inches.
Power Feeds per revolution of spindle for various cone steps on power feed .002, .005, .008.
Hole in spindle bored to fit No. 4 Morse taper.
Base has T slots.
Three distinct complete feeds—power feed, heel feed and lever feed.
Spindle speeds—
25—100 back gears in.
130—535 back gears out.

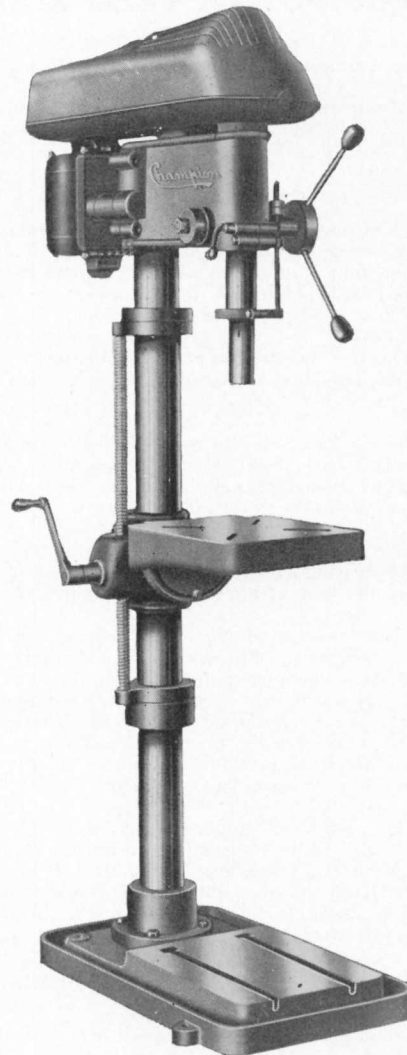
Capacity—drills 0 to 1 1/2 inches.
Diameter of crown gear, 6 7/8 inches.
Diameter of bevel pinion, 4 inches.
Pitch of crown gear and pinion gear, 6.
Crown gear, 40 teeth.
Pinion gear, 21 teeth.
Bearings split on upper shaft are 7 inches long.
Phosphor bronze bearings in head.
Floor space, 19 1/2 x 35 inches.
H.P. required—1 1/2 H.P.
Weight, 1200 lbs.

Champion 2100 Back-Geared Upright Power Drill can be furnished with Positive Gear Feed if so ordered.



CHAMPION NO. 2000 HIGH SPEED DRILL

Swings to Center of 20-inch Circle



A high-grade full ball-bearing production drill up to 1" capacity.

A stocky direct V-belt drill, has six speeds, taking a large range of work.

Table raises and lowers with crank, all gears being enclosed.

Table tilts to any angle up to 45 degrees and can be swung out of the way.

Drill-head is clamped to ground column, can be raised or lowered or swung completely around.

Table has four slots and base two T-slots.

Depth gauge for drilling can be set to drill any depth desired up to 5".

Spindle is graduated in $\frac{1}{16}$ ", and is bored for No. 3 Morse Taper Shank Bits.

Belt Guard is hinged, light and strong. Opens from side.

Drill can be equipped with either 1-H.P. ball-bearing motor for capacity up to 1", or $\frac{1}{2}$ -H.P. ball-bearing motor for capacity up to $\frac{3}{4}$ " and Switch; or can be furnished less motor.

| | | | |
|--|---|--|---|
| Height..... | 68 in. | Diameter of spindle..... | $\frac{3}{4}$ in. |
| Six speeds—340, 620, 1170, 1750, 2365, 3080 R.P.M. with 1750 R. P. M. Motor..... | | Traverse of spindle..... | 5 in. |
| Distance spindle to table..... | 27 in. | Diameter of column..... | $3\frac{1}{2}$ in. |
| Distance spindle to base..... | $43\frac{3}{4}$ in. | Machined base..... | $15\frac{1}{4}$ in. x $12\frac{1}{4}$ in. |
| Distance from column to center spindle..... | $10\frac{1}{2}$ in. | Base overall..... | 28 in. x $16\frac{1}{2}$ in. |
| Size of table..... | $14\frac{1}{2}$ in. x $12\frac{1}{4}$ in. | Weight with 1-H. P. motor, 680 lbs..... | Code—Celadas |
| Table raises and lowers..... | 18 in. | Weight with $\frac{1}{2}$ -H. P. motor, 600 lbs..... | Code—Celabunt |
| | | Weight less motor, 525 lbs..... | Code—Celentes |



No. 16F and 16B CHAMPION DELUXE DRILL

The Latest Design 16" Production Utility and Tool Room Drill of 1/2" Capacity

This drill contains all modern features. Electric light mounted in head, illuminating completely all working surfaces yet shielded from the operator's eyes. Switch for light and to start and stop electric motor mounted convenient to the operator at the head of the guard. Machine is precision built with floating spindle ball bearing throughout. Main frame adjustable for spindle quill wear. Spindle is accurately ground, quill graduated in 1/16" and is adjustable for wear. Depth gauge can be set to drill any desired depth which also is graduated and has lock nut to set the drill up to 4 inches the full travel of Spindle. Spindle can be locked in any position for use with rotary files or grinders in die making work. Drill furnished with oil groove table and base with T-slots in base. Motor is mounted on an adjustable base so belt can be tightened. Drill comes complete with three jaw key geared 1/2" capacity adjustable chuck, also motor and light completely wired to 10-foot cord with plug ready to run. Standard machine includes a 1/3 horsepower 110 volt 60 cycle single phase motor. Motor is mounted on an adjustable slide base to give desired tension on belt. Larger motors and other current characteristics can be furnished on special order. Also a slotted table for wood-working attachments can be furnished.

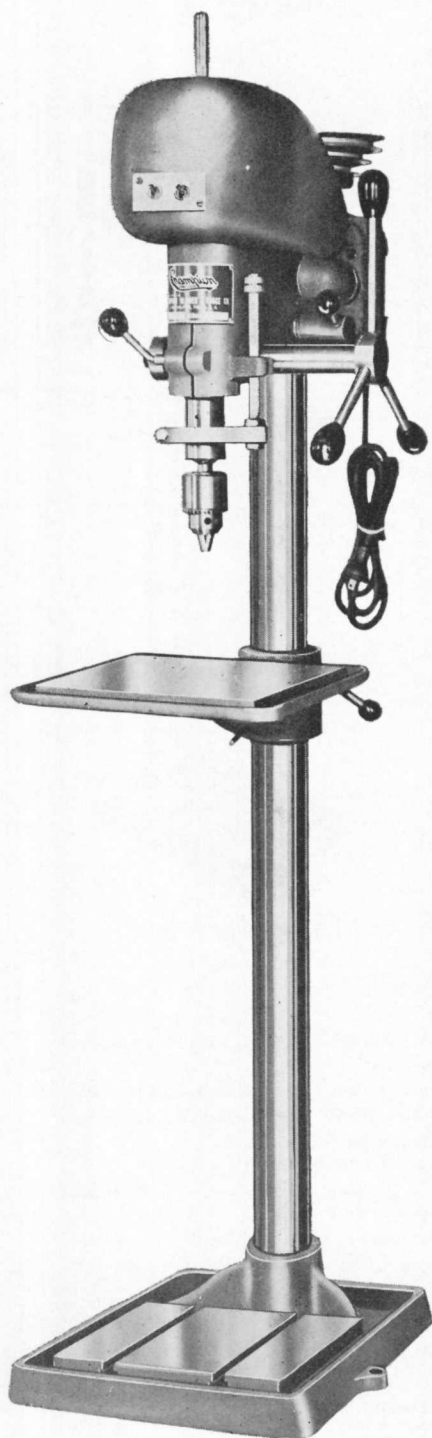
SPECIFICATIONS

No. 16F Drill

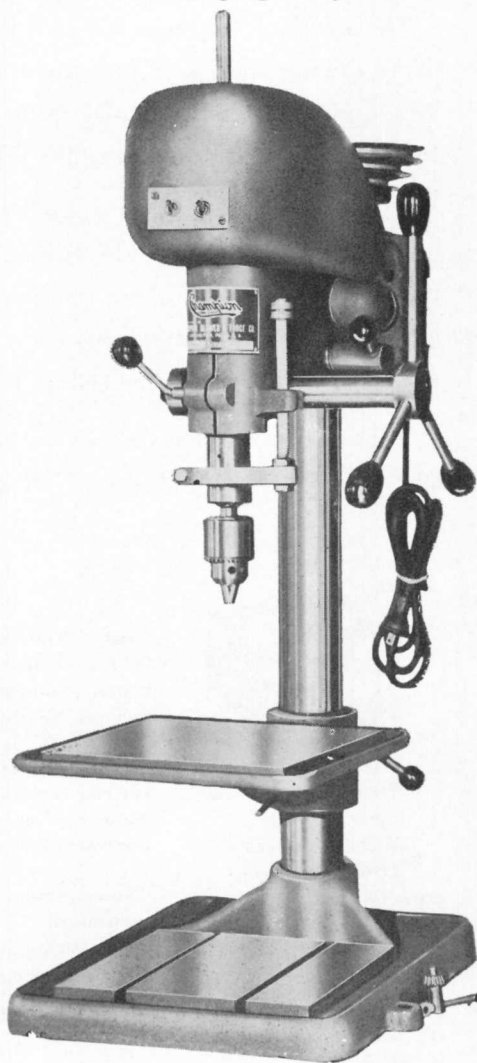
Capacity 1/2" Steel or Iron.
Spindle Speeds—450, 950, 1600, 2800, 5100, with 1725 R.P.M. motor.
12" x 12" oil grooved tilting table with 10" x 10" machined surface.
Base 13 1/4" x 19" with T-slots machined surface 10" x 10".
Depth gauge graduated in 1/16" stop collar can be set for any depth drill up to 4".
Spindle floating type 5/8" full ball bearing 4" up and down travel.
Chuck Jacobs 1/2" with wrench.
Distance between chuck and base, 46 inches.
Column 2 3/4" precision ground heavy tubing.
Height, 68 inches.
Motor required 1/3 H.P. 1725 R.P.M. vertical mounted.
Shipping weight, 250 pounds.

No. 16B Drill

Same as 16F Drill except the following.
Height, 40 inches.
Distance between Chuck and Table, 10 inches.
Distance between Chuck and Base, 16 inches.
Traverse Table on Column, 9 inches.
Weight with Motor, 225 lbs.



No. 16F Drill



No. 16B Drill



Champion No. 1600 and 1600-B 16-Inch Swing 5-Speed Full Ball-Bearing Production Drill with T-Slot Oil Groove Base with Geared Adjustable Chuck 1/2" Capacity

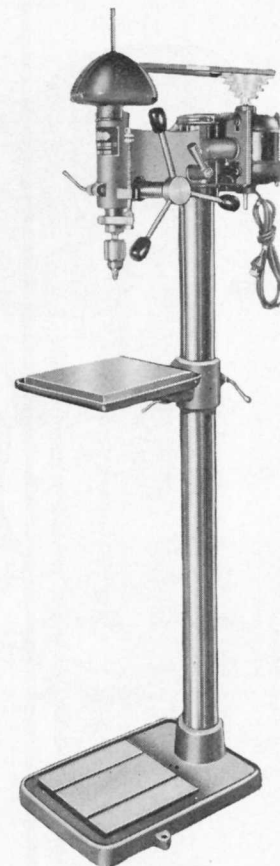
A high grade 5-speed ball-bearing drill, 450 R.P.M. to 5100 R.P.M., 1/2" capacity in steel and 2" capacity in wood. Pulleys are balanced making a smooth running high and low speed drill with oil grooved 12" x 12" table and oil grooved T-slot base so that an oil pump can be used for wet drilling.

Table tilts to any angle up to 45°. Pin under table lines up table parallel to spindle. The drill head rests on a collar, clamped to column and permits head to be swung around like a radial drill and can be clamped anywhere without falling when head clamp is released.

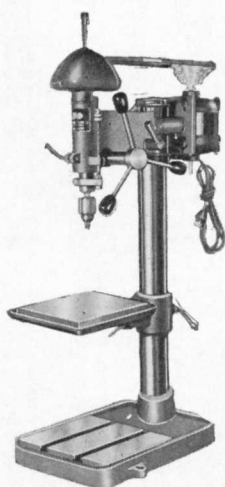
The spindle is graduated in 1/16" and automatic stop can be set for any depth drilling up to 4", the up and down travel of spindle. Head clamp to lock spindle also permits take up for wear. Drill comes regularly with 0" to 1/2" No. 33 Jacobs chuck which will take all makes of woodworking attachments.

Standard equipment is 1/3 H.P., AC, 110 volt, 60 cycle, single phase motor and 10-foot cord, plug and motor switch. The motor is mounted on an adjustable motor base so any make motor can be mounted and belt tension can be adjusted and locked for belt tension desired.

The spindle overhangs 8" beyond column. The base is 15" x 18" overall surrounded by 1 1/2" oil groove 10" x 10" machined surface and T-slots.



1600 Floor Drill



1600-B Drill

SPECIFICATIONS

1600 FLOOR DRILL

- Height, 68 inches.
- Drills to center 16-inch circle.
- Distance between chuck and table, 41 inches.
- Distance between chuck and machined base, 46 inches.
- Column, 2 3/4 inches diam.
- Traverse of spindle, 4 inches.
- Diameter of spindle, 5/8 inches.
- Traverse table on column, 40 inches.
- Oil groove table 12" x 12" with 10" x 10" machined surface.
- Spindle speeds—450, 950, 1600, 2800, 5100 R.P.M.
- Base 15" x 18" with 10" x 10" machined surface with T-slots.
- Floor space, 16 x 20 inches.
- Capacity 1/2" in steel, 2" in wood. No. 33 Jacobs chuck with geared wrench.
- Weight less motor, 210 lbs.

1600-B DRILL

- Specifications same as 1600 drill except for the following:
- Height, 40 inches.
- Distance between chuck and table, 12 inches.
- Distance between chuck and base, 17 inches.
- Traverse table on column, 11 inches.
- Weight with motor, 200 lbs.

- No. 1602-B—Two Spindle Drill with Motor less Stand
- No. 1603-B—Three Spindle Drill with Motor less Stand
- Pair of Floor Legs to make Floor Drill, extra
- 1500 FLOOR DRILL. Same as No. 1600 with 18 inch Round Base. Shipping weight with motor, 200 lbs.
- 1500-B BENCH DRILL. Same as No. 1600B with Base 17" x 12" and 10" x 10" machined surface. Weight with motor, 175 lbs.



CHAMPION MOTOR DRIVEN BENCH DRILL No. 1400



A good 14" Swing 3 speed Bench Drill with $\frac{5}{8}$ " Spindle thrust for work up to $\frac{1}{2}$ " in cast iron or 2" hole in wood. Complete with $\frac{1}{2}$ " Jacobs Chuck taking straight shank bits or can be had with $\frac{1}{2}$ " 3 Jaw Screw Chuck.

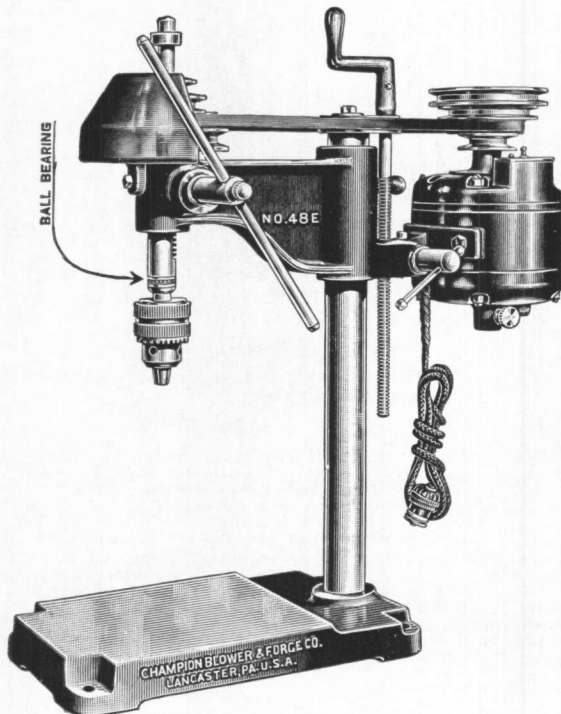
Comes complete with $\frac{1}{4}$ H.P. 1750 R.P.M. Motor AC 110 volt 60 cycle single phase ready to run or can be ordered less Motor with Belt and Motor Pulley with $\frac{1}{2}$ " hole in Motor Pulley.

Drill head can be swung completely around so larger work can be drilled if desired. Table is clamped to column with lock screw not marring column.

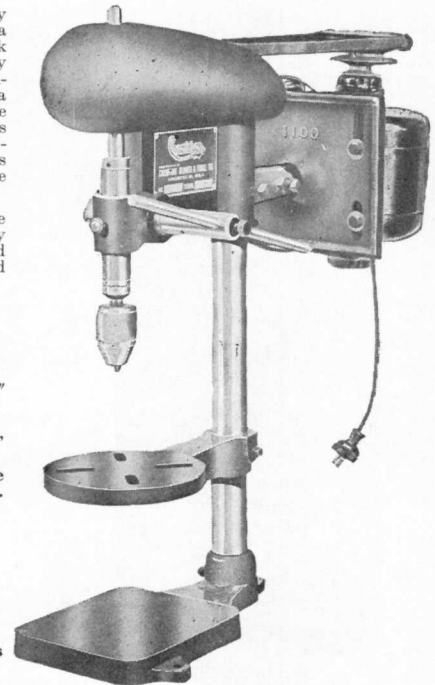
SPECIFICATIONS

Height 27"
Spindle Speed 750-1750-3460 R.P.M. with 1750 R.P.M. Motor.
Table is $7\frac{1}{8}$ " x $7\frac{1}{8}$ " machined slotted surface to hold work.
Base is $7\frac{1}{8}$ " x 8" machined slotted surface.
Spindle is $\frac{5}{8}$ " dia. accurately ground.
Spindle Travel $2\frac{1}{2}$ " up and down has adjustable spring to return spindle when drilling.
Column is $1\frac{1}{2}$ " solid cold rolled steel.
Distance between Chuck and Table 8".

Distance between Chuck and Base 10".
1750 R.P.M. $\frac{1}{4}$ H.P. AC 110V 60C 1PH Motor furnished regularly.
No. 1400J with Jacobs Chuck.
No. 1400 Drill with 3-Jaw Screw Chuck.
Weight 75 lbs.



CHAMPION MOTOR DRIVEN BENCH DRILL NO. 1100



A Drill sold at a very low price, yet does a wide range of work within the capacity found on so many higher priced drills. Has a positive grip adjustable $\frac{1}{2}$ " chuck, three speeds 3450, 1725, 860. Graduated quill, with its drilling head adjustable to any height desired.

Motor and base adjustable to properly tighten the V-belt, and attachment cord and plug.

SPECIFICATIONS

Height overall, 27".
Drills to center of 12" circle.
Diameter of spindle, $\frac{1}{2}$ ".
Greatest distance base to chuck, $11\frac{1}{4}$ ".
Spindle travel, $2\frac{1}{2}$ ".
Capacity, $\frac{1}{2}$ ".
Base size, 7 x 6".
Weight, 75 lbs.
Code—Fecomare.
Extra for $\frac{1}{2}$ " Jacobs Chuck.

CHAMPION MOTOR DRIVEN BENCH DRILL NO. 48E

Champion Motor Driven Bench Radial Drill with four speeds of spindle, represents features never found heretofore on a drill of this price.

The Motor is attached to the main frame of the Drill, in a vertical position, thereby eliminating cross-belts, and gives a direct drive to spindle with minimum friction; saving more power or securing more efficiency with same power.

The Lever Feed Handle actuates the up and down movement of the spindle by rack and pinion, giving a sensitiveness in drilling, which saves the breaking of drill bits. The Lever Feed Handle is arranged with spring to give automatic raising of the drill bit out of the hole being drilled, giving it sensitive feeding.

The Drill has screw and handle for quick raising and lowering of drilling head. The Drill Head can be securely clamped at any point, making it perfectly rigid and solid. Can be swung around on either side of column, enabling user to drill on either side of work bench, which is very convenient for drilling holes in frames or long pieces, usually requiring an expensive radial drill.

The spindle and graduated sleeve are ground to a micrometer fit and equipped with Ball Bearings.

Has Four-Step Sheave Pulley with V-belt, giving great pulling power at all speeds, without any slipping. Four spindle speeds are secured. Is equipped with $\frac{1}{4}$ H. P. motor, attachment cord, plug and switch ready to use.

Has self adjusting Belt Tightener to give belt the proper tension at all times.

SPECIFICATIONS

Drills to center of 14-inch circle.
Spindle has Adjustable Three-Jaw Chuck to take straight shank drill bits.
Drills holes up to $\frac{1}{2}$ inch.
Up and down travel of spindle $2\frac{1}{2}$ ".
Travel of Drill Head on column 7".
Distance between spindle and base 12".
Spindle speeds—875—1340—2885—3500 R.P.M.
Diameter of column $1\frac{1}{2}$ ".
Size of Planed Base 8"x10".
Bench Space $14\frac{1}{2}$ " x 8".
Height 28".
Weight 120 lbs.
Code—Fechten.



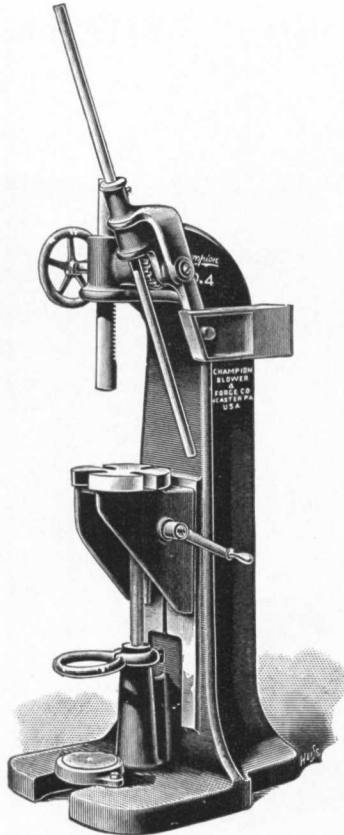
CHAMPION ARBOR PRESS NO. 4

No. 4 Champion Arbor Press is a large and heavy floor Arbor Press needed in factories, machine shops and garages. Frame is heavy cast iron. Ram and Pinion are steel—heat-treated. Hand lever is adjustable for large and small work, and is counter-balanced. The table is adjusted by means of a screw—permitting it to remain where placed.

The babbitted cushion on the base protects the mandrel when falling. The ring prevents the mandrel from falling lengthwise.

SPECIFICATIONS

| | | | |
|--------------------------------------|-------------------------|--------------------------------|------------------------------------|
| Capacity in tons..... | 5 | Size of Ram..... | 22 inches x 2 $\frac{1}{4}$ inches |
| Diameter of work..... | 18 inches | Floor Space..... | 25 inches x 33 inches |
| Largest Mandrel..... | 3 inches | Height..... | 62 inches |
| Size of Table..... | 10 $\frac{1}{2}$ inches | Leverage..... | 60 to 1 |
| Greatest Distance from Table to Ram, | 29 inches | Weight, 1270 lbs. Code—Prince. | |



CHAMPION ARBOR PRESS NO. 3

The No. 3 Champion Arbor Press is the popular size, for use in factories, machine shops and garages, and is designed to mount on the bench or lathe bed.

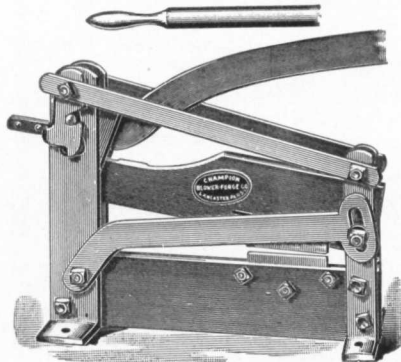
The frame is cast iron; the ram and pinion of steel, heat-treated; the hand lever is adjustable for large and small work

SPECIFICATIONS

| | |
|--|------------------------------------|
| Capacity in tons..... | 3 |
| Diameter of work..... | 12 inches |
| Largest Mandrel..... | 1 $\frac{1}{2}$ inches |
| Size of Table..... | 7 inches |
| Greatest Distance from Table to Ram..... | 11 inches |
| Size of Ram..... | 1 $\frac{1}{2}$ inches x 17 inches |
| Floor Space..... | 8 $\frac{1}{2}$ inches x 19 inches |
| Height..... | 23 inches |
| Leverage..... | 45 to 1 |
| Weight, 160 lbs. Code—Prant. | |



CHAMPION STEEL SHEARS



Champion Shear is made of Steel, there being not a piece of cast iron used in its entire construction. It will stand up without breakage under the work that we claim and fully guarantee for it.

No. 1 Champion Shear; Weight, 255 lbs.; has 6-inch knives, $\frac{1}{4}$ inch thick; will cut 4-inch by $\frac{1}{2}$ -inch flat iron, and 1-inch round or square iron. Weight 250 lbs. Code—Fikar.

No. 2 Champion Shear; Weight, 260 lbs.; has 12-inch knives, $\frac{1}{4}$ -inch thick; will cut 4-inch by $\frac{1}{2}$ -inch flat iron, and 1-inch round or square iron. Weight 252 lbs. Code—Fikene.

CHAMPION BENCH SHEAR NO. 10



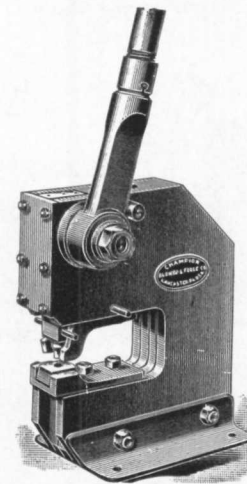
Champion Bench Shear is a stoutly built Hand Shear. The blades are of the best grade steel.

The Handle of convenient length is compounded with a rack and pinion. It is a good light Shear for the workshop, tinsmith, farmer and general repairman.

Will Shear No. 14 gauge.
Cuts round $\frac{1}{2}$ ".
Cuts flats $\frac{1}{2}$ " x $\frac{1}{4}$ ".

Length of Shears, 4".
Height of Shears, 5 $\frac{1}{2}$ ".
Weight, 10 lbs.
Code—Cegata

CHAMPION STEEL PUNCHES



Champion Steel Punches are built entirely of steel. On account of the breakage-proof, and rigid construction this all-steel punch is far superior to the cast iron and cast steel machines. The punches are fastened by a key and the machine furnished with removable die holders.

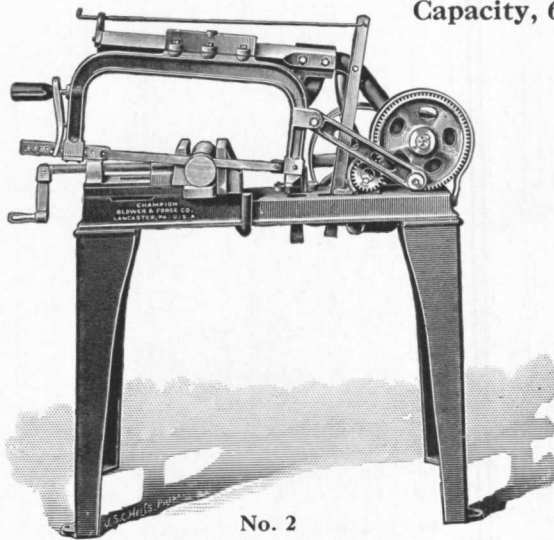
No. 1 Champion Steel Punch; Capacity, $\frac{1}{4}$ -inch Hole in $\frac{1}{2}$ -inch Material; Throat, 2 $\frac{1}{2}$ inches. Weight, 30 lbs. Code—Fingard.

No. 2 Champion Steel Punch; Capacity, $\frac{1}{2}$ -inch Hole in $\frac{1}{2}$ -inch Material; Throat, 6 $\frac{1}{4}$ inches. Weight, 190 lbs. Code—Finken.

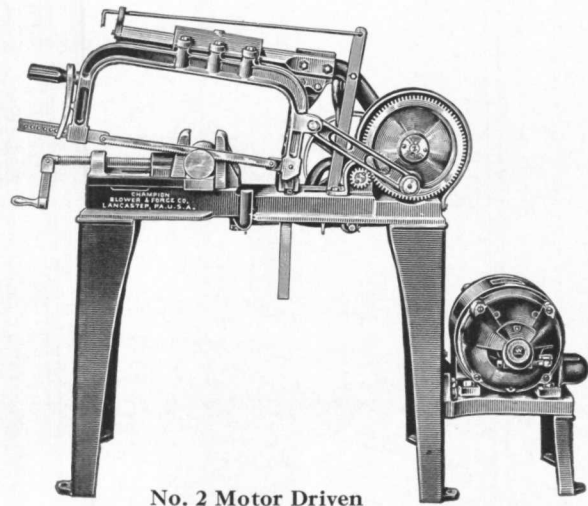


CHAMPION POWER HACK SAW MACHINE NO. 2

Capacity, 6 Inches x 6 Inches



No. 2



No. 2 Motor Driven

Champion No. 2 Power Hack Saw Machine combines many improved features, enabling it to saw fast and straight with maximum life to the saw blade.

It has the following important features:

A swivel vise cutting to an angle of 45 degrees with 14 inch saw blade.

Adjustable gravity feed by means of weight—reducing the breaking or buckling of saw blades to a minimum.

An automatic shut-off which instantly stops the machine when the sawing of material is completed.

A positive clutch—simply constructed—preventing complicated parts getting out of order.

Driven by accurately cut gears, requiring a V-belt and positive drive with less power.

An attachment to automatically lift the saw blade on return stroke and gradually replace the blade in contact with the work on cutting stroke, thereby increasing the cutting life of the blade, and reducing to a minimum the breakage.

Length of Blades, 8, 12 or 14 inches.

Stroke of Blade, 6 inches.

Cutting Capacity, 6 inches x 6 inches.

Driving Pulley, 8½ inches diam. x ½ inch V-Belt.

Floor Space 36 inches x 18 inches.

DETAILED DIMENSIONS

Vise Jaws, 3½ inches high x 5½ inches wide x 6 inches opening.

Geared 3 to 1.

Speed of Pulley, 210 to 240 R. P. M.

Weight, 235 pounds.

Code—Benter.

No. 2 Hack Saw Machine with ½ H. P. Motor, 110-220 volts, alternating current and switch. Weight, 380 lbs. Code—Benzoe.

CHAMPION POWER HACK SAW MACHINE NO. 1

Capacity, 4 Inches x 4 Inches

Champion No. 1 Power Hack Saw Machine is a well-made, rugged, low-priced Hack Saw, for light work in machine shops and garages, also for construction work. Will cut fast and straight.

Equipped with positive clutch, simply constructed, preventing complicated parts getting out of order.

Is equipped with automatic shut-off which instantly stops the machine when the sawing of the material is completed.

Made with adjustable bearings so wear can be taken up when necessary.

DETAILED DIMENSIONS

Length of Blades, 10

inches to 12 inches.

Stroke of Blade 4

inches.

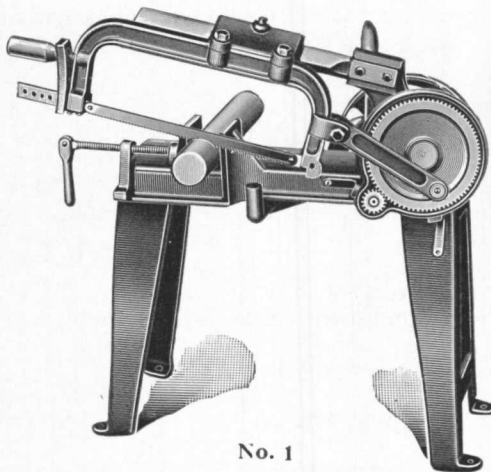
Cutting Capacity, 4 inches x 4 inches.

Drive Pulley, 8½ inches diam. x ½

inch V-Belt.

Floor Space required, 24 inches x 10

inches.



No. 1

Vise Jaws, 2½ inches high x 3½ inches

wide x 4½ inches opening.

Speed of Pulley, 400 to 440 R.P.M.

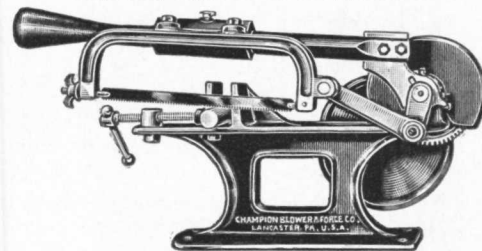
Geared 5½ to 1. Weight, 115 lbs.

Code—Benton.

CHAMPION BENCH POWER HACK SAW MACHINE

NO. 0

Capacity 2½ inches x 2½ inches



A well-made, back-gear Bench Hack Saw, which will cut fast and accurately up to its capacity.

Length of blade 10"

Stroke of blade 3"

Cutting capacity 2½" x 2½"

Drive pulley 6" diam. for V-Belt.

Size of base 10½" x 3½".

Speed of pulley 320 to 360-R.P.M.

Gear ratio 4½ to 1.

Weight 40 lbs.

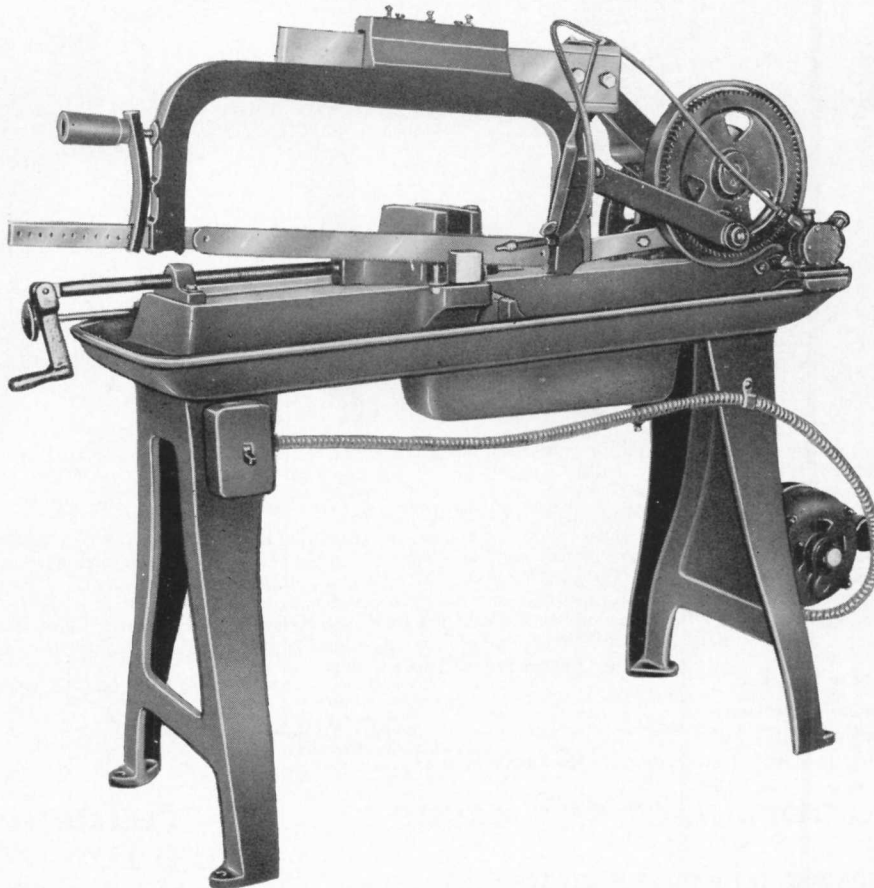
Code—Benir.



CHAMPION POWER HACK SAW MACHINE WET CUT V BELT DRIVE

NO. 3

Capacity 8 inches x 8 inches



Champion No. 3 Wet Cut V Belt Motor Driven Power Hack Saw Machine has many improved features which saws fast and straight and pump for cooling system.

Special features are:

- Lifts on forward stroke.
- All Gears are machine cut.
- Motor adjusted to tighten belt giving 3 speeds 90—110—130 R.P.M.
- Automatic shut off stops machine when sawing is completed on forward stroke.
- Gravity feed adjusts various cutting conditions.
- Swivel vise cuts to an angle of 45° up to 6 inches.
- A Position Clutch prevents parts getting out of order.
- An eccentric to automatically lift the saw blades on return stroke and gradually replacing the blade in contact with the work in cutting slot.
- Cooling pump, gear operated, applies cutting compound on the blade.

SPECIFICATIONS

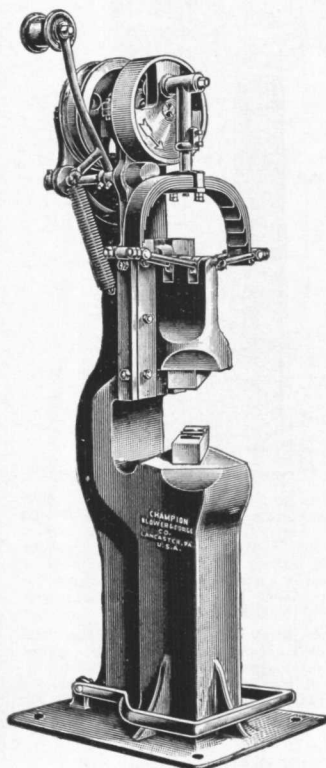
| | | | |
|-----------------------|-----------------|-----------------------------|----------------|
| Length of Blade..... | 14, 17 or 18" | Gear Ratio..... | 52 to 1 |
| Stroke of blade..... | 6" | Speed of Pulley..Adjustable | 140 to 220 RPM |
| Cutting capacity..... | 8 x 8" | Floor Space..... | 18" x 36" |
| Driving Pulley..... | 8½" x ½" V Belt | Size of Motor..... | ½ H.P. |
| Vise Jaws..... | 6¼" long | Weight..... | 425 lbs. |



HERCULES POWER HAMMER

With Flexibility in Stroke of a Hammer in a Mechanic's Hand

Made in Three Sizes



No. 0 and 1

Hercules "Patented" Power Hammer is made in three sizes: No. 0 with Ram weighing 30 pounds, No. 1 with Ram weighing 65 pounds, and No. 2 with Ram weighing 125 pounds. They contain all the good features of the best Hammer ever built, and sell at a moderate figure.

The frame and anvil are cast in one solid piece, therefore insures perfect alignment of the dies and a solid anvil, giving rigidity and solidity for the reception of severe and rapid blows.

The position of the dies is such that there is no limit to the length of the bar which can be worked.

They are double-sided Hammers, and can be used as well from one side as the other. They can be placed between two fires, and operated equally as well from either fire by a double treadle.

The control of these Hammers is so perfect that the blow can be made at the will of the operator, from a gentle stroke to a rapid succession of mighty blows, and material to its full capacity can be forged down to the size of a horseshoe nail without any change of adjustment.

The friction for stopping the Hammers is such that the operator can strike one blow and stop with the Hammer on the up-stroke.

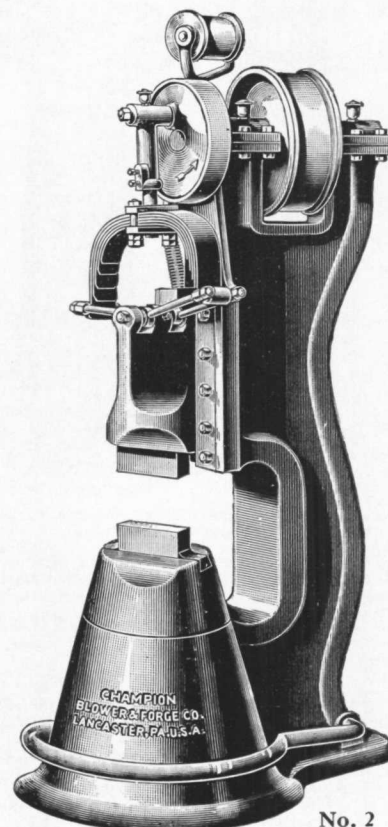
The Hammer Head and Ram stand out from the main part of the frame, are not covered up to obscure the work of the operator, also in forging iron with an angle in it, you can get in very close to the corner.

The height of the frame is such that a tire three feet in diameter can be welded, and it will weld a tire 4 inches wide and 1 inch thick very easily.

No. 0 Hercules Power Hammer, has upper die 3 x 1½ ins.; lower die, 3 x 2 ins. Size of base of Hammer, 18 x 25 ins. Height over all, 5 ft. 4 ins. Weight of ram, 30 lbs. Pulley, 9 x 2½ ins. Speed, 400 R.P.M. Capacity, 2 ins.; square or round. Weight, 1170 lbs. Code—Formage.

No. 1 Hercules Power Hammer, has dies with plain surface, 2½ x 3 ins.; and two plain and one tapering groove for forging round iron, straight and tapering. Size of base of Hammer, 20 x 27 ins. Height over all, 5 ft. 8 ins. Weight of ram, 65 lbs. Pulley, 10 x 2½ ins. Speed, 300 R.P.M. Capacity, 2½ ins.; round or square. Weight, 1355 lbs. Code—Figon.

Extra dies for special work will be charged extra. No. 2 Hercules Power Hammer, upper die, size of face, 6 x 3 ins.; lower die, size of face, 6 x 3 ins.; size of base of Hammer, 27 x 46½ ins. Height over all, 7 ft. 3 ins. Weight of ram, 125 lbs. Pulley diameter, 14 ins.; face 6½ ins. Speed, 150 R.P.M. Capacity, 3 ins.; round or square. Weight, 4500 lbs. Code—Flexible.



No. 2

HERCULES ELECTRICALLY DRIVEN POWER HAMMER

Hercules "Patented" Electrically Driven Power Hammer is identical with the Hercules Patented Power Hammer shown above; the only difference being that this Hammer is operated by an electric motor. The Motor is placed to give a long belt between the motor and the driving pulleys of the Hammer, giving an advantage in power not usually found.

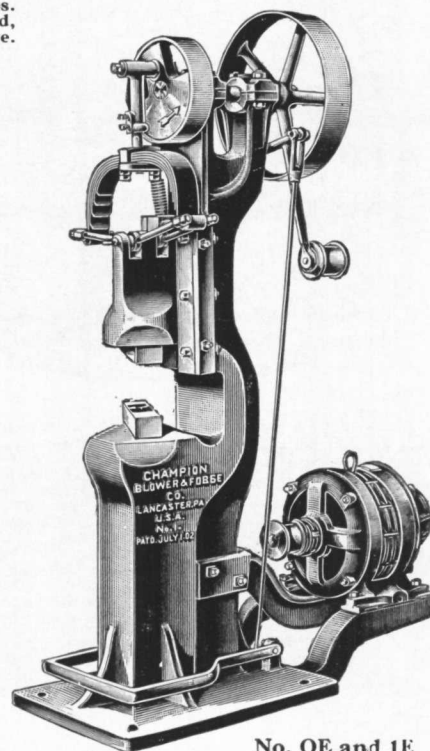
This Hammer is furnished with a switch for starting and stopping the motor.

Before ordering a Hercules "Patented" Electrically Driven Power Hammer, ask your electric current manufacturer whether the current is direct or alternating and the voltage.

No. 0E Hercules Electrically-Driven Power Hammer, any Current and Voltage. Has Upper Die, 3 x 1½ ins.; Lower Die, 3 x 2 ins. Size of Base of Hammer, 18 x 25 ins. Height over all, 5 Ft. 4 ins. Weight of Ram, 30 lbs. Pulley, 18 x 2½ ins. Speed, 400 R.P.M. Capacity, 2 ins.; Square or Round. Size of Motor 1 H. P. Weight, 1200 lbs. Code—Firstree.

No. 1E Hercules Electrically-Driven Power Hammer, any Current and Voltage. Has Dies with Plain Surface, 2½ ins. x 3 ins., and Two Plain and One Tapering Groove for Forging Round Iron, Straight and Tapering. Size of Base of Hammer, 20 ins. x 27 ins. Height over all, 5 Ft. 8 ins. Weight of Ram, 65 lbs. Pulley, 18 x 2½ ins. Speed, 300 R.P.M. Capacity, 2½ ins.; Round or Square. Size of Motor 2 H. P. Weight, 1620 lbs. Code—Filttype.

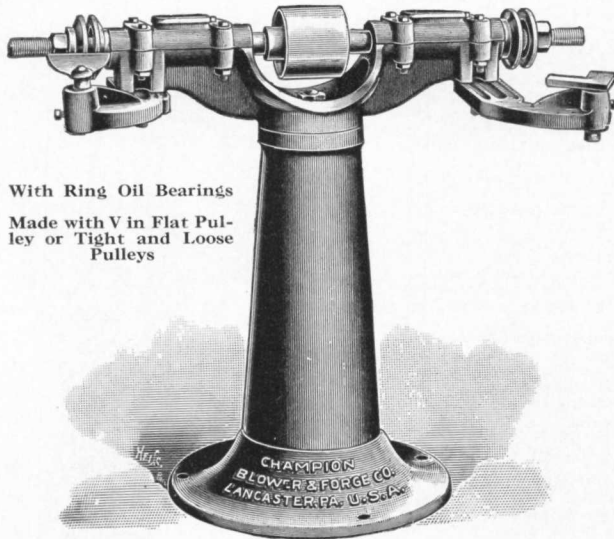
No. 2E Hercules Electric Driven Power Hammer, any Current or Voltage. Upper Die, size of face, 6 ins. x 3 ins.; Lower Die, size of face, 6 ins. x 3 ins. Size of base of Hammer, 27 ins. x 46½ ins. Height over all, 7 Ft. 3 ins. Weight of Ram, 125 lbs. Pulley diameter 32 ins., face 6½ ins. Speed, 150 R.P.M. Capacity, 3 ins., Round or Square. Size of Motor 5 H. P. Weight, 4600 lbs. Code—Flexipede.



No. 0E and 1E



NO. 1 CHAMPION COLUMN GRINDER



With Ring Oil Bearings

Made with V in Flat Pulley or Tight and Loose Pulleys

No. 1 Champion Upright Column Grinder has been built heavy and substantial to meet all conditions of grinding and polishing in the machine shop, foundry, blacksmith shop, garage, etc.

The Champion Grinder has special long spindles and bearings. The bearings have unusually large space for the operator and for grinding large and irregular shaped castings. It is designed to grind both large and small work, as well as bicycle and automobile work, also polishing.

The bearings are adjustable and babbitted with genuine babbitt and are provided with ring oilers, giving perfect lubrication. Each adjustable bearing has four bolts, holding them in a true line.

The Champion Grinder is supplied with rests to stand heavy work and can be easily arranged for the side or face of the wheel.

No. 1 Champion Upright Column Grinder; Capacity, 16 Inches x 3 Inches; Wheel with 1 1/4-inch Hole; Arbor to Floor, 34 Inches; Diameter of Base, 18 Inches; Length of Arbor, 40 Inches; Diameter of Arbor, 1 5/8 Inches; Size of Pulleys, 4 3/4 Inches x 4 1/4 Inches. Weight Complete, 255 lbs. Code—Fiest. Extra for Tight and Loose Pulleys.

Guards for above Grinder for 16-inch Wheel. Weight 120 lbs.

NO. 11 CHAMPION COLUMN GRINDER



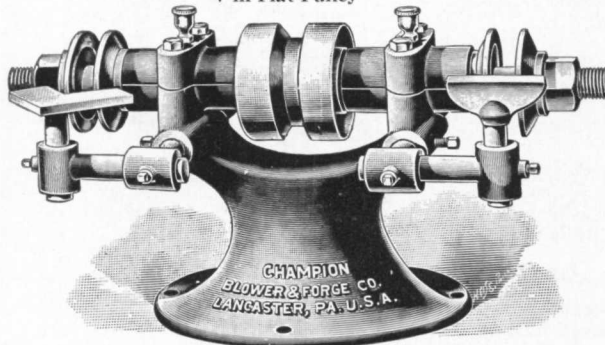
With Ring Oil Bearings

No. 11 Champion Upright Column Grinder is a very substantial design for garage and general repair work. Bearings are long, well babbitted with genuine babbitt, fitted with ring oilers and oil reservoir, giving perfection lubrication. It is equipped with adjustable rests, which can readily be removed, and guards. The extra long distance between the wheels permits the operator to grind or buff large pieces without coming in contact with the stand.

No. 11 Champion Upright Column Grinder; Capacity, 12 x 2 1/2 Inches. Wheel with 1-inch Hole. Arbor to Floor, 36 1/2 inches; Diameter of Base, 14 Inches. Length of Arbor, 25 inches. Size of Pulleys, 3 3/4 x 3 Inches. Weight, 165 lbs. Code—Funk.

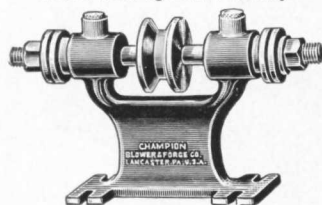
NO. 2, NO. 0 CHAMPION BENCH GRINDERS

With Ring Oil Bearings Made with V in Flat Pulley



NO. 4 CHAMPION BENCH GRINDER

Made with Special V Pulley



No. 4 Champion Bench Grinder. Capacity 6 inches x 1-inch; Wheels with 5/8-inch Hole. Length of Arbor 12 inches; Arbor to Bench 5 1/4 inches; Size of Base 7 inches x 3 1/2 inches; Size of Pulley 2 inches x 1 5/8 inches. Can be furnished with V-pulley. Diameter of Arbor 3/4 inch. Weight 20 lbs. Code—Feesley.

No. 4A Champion Bench Grinder with Tight and Loose Pulley. Weight 22 lbs. Code—Feeslet.

No. 2 Champion Bench Grinder. Capacity, 16 Inches x 2 Inches; Wheels with 1 1/4-inch Hole. Arbor to Bench, 9 1/2 Inches. Size of Base, 13 Inches x 9 Inches. Length of Arbor, 25 Inches. Diameter of Arbor, 1 5/8 Inches. Size of Pulley, 4 1/2 Inches x 4 Inches. Weight, 100 lbs. Code—Femaler.

No. 2A Champion Bench Grinder with tight and loose pulleys. Size of Base, 15 Inches x 9 Inches. Length of Arbor, 29 Inches. Weight, 130 lbs. Code—Femalarte.

Guards for above Grinders for 16-Inch Wheels. Weight, 50 lbs.

No. 0 Champion Bench Grinder. Capacity, 12 inches x 2 Inches. Wheel with 1-inch Hole; Arbor to Bench, 8 Inches; Size of Base, 9 Inches x 6 Inches; Length of Arbor, 18 Inches; Diameter of Arbor, 1 1/8 Inches; Size of Pulleys, 4 Inches x 3 Inches. Weight, 50 lbs. Code—Fiesus.

No. 0A Champion Bench Grinder with Tight and Loose pulleys. Size of Base, 13 Inches x 6 Inches; Length of Arbor, 21 Inches; Weight, 65 lbs. Code—Fiesuste.

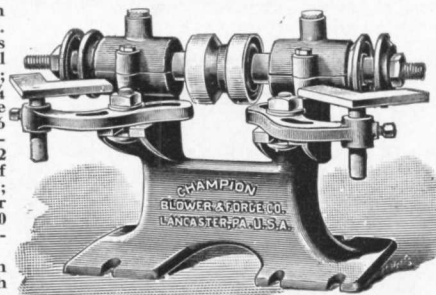
Guards for either Grinder for 12-inch Wheels. Weight, 40 lbs.

NO. 3 CHAMPION BENCH GRINDER

With Ring Oil Bearings Made with V in Flat Pulley

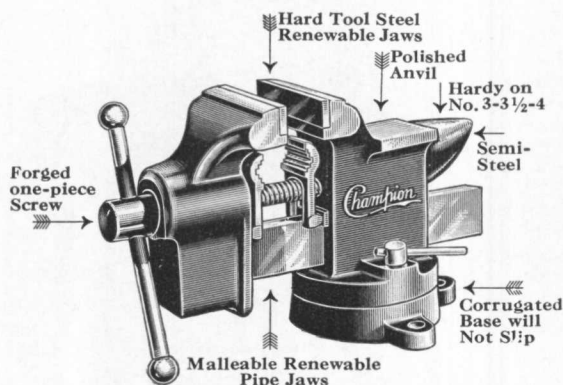
No. 3 Champion Bench Grinder. Capacity 10 inches x 1 1/2 inches; Wheel with 3/4-inch Hole; Arbor to Bench 6 3/4 inches; Size of Base 10 1/2 inches x 6 inches; Size of Pulleys 3 inches x 2 inches; Length of Arbor 15 inches; Diameter of Arbor 7/8 inch. Weight 30 lbs. Code—Felsinam.

No. 3A Champion Bench Grinder with Tight and Loose Pulleys. Length of Arbor 16 inches; Weight 35 lbs. Code—Felsinamte. Guards for either Grinder for Wheels. Weight, 30 lbs.





CHAMPION SWIVEL BASE VISES



Heavy Weight with Removable Pipe Jaws
No. 3-3 1/2-4-5-6

Champion Vises are well made, having a cold rolled steel draw bar; removable hardened steel jaws, knurled and ground to fit. Handle and screw are forged steel. The thread on the screw is square or acme thread machine cut.

Top of Jaws and Anvil Face, as well as all steel parts, are highly polished.

The Body and Base are painted red—attractively finished, and are real values for light work in Machine Shops, Pattern and Model Shops, Electrical and Radio Shops, Garages, and for the Home Workshop.

Swivel base holds fast in any position the same as all higher priced Vises costing three times as much. They can be used as stationary vises, if so desired.

Have removable malleable pipe jaws holding 1 1/4" pipe.

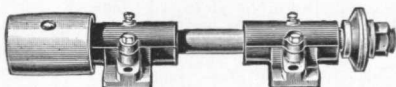
Packed in strong individual fibre cartons.

No. 3-3 1/2-4 Vises furnished with Hardie.

SPECIFICATIONS

| No. | Vise | Width of Jaw | Jaw Opening | Height | Diam. Handle Head | Diam. Forged Screw | Size Steel Draw-Bar | Size Hardie | Size Anvil Overall | Size Base Lock Screw | Wt. lbs. | Std. Pkg. | Code |
|-------|-----------------|--------------|-------------|---------|-------------------|--------------------|---------------------|-------------|--------------------|----------------------|----------|-----------|---------|
| 3 | Radio and Home | 3" | 3" | 6 1/4" | 1 1/8" | 5/8" | 1 1/4 x 5/8" | 3/4" | 3 5/8 x 1 7/8" | 5/8" | 16 | 12 | Cepace |
| 3 1/2 | Radio and Home | 3 1/2" | 3 1/2" | 6 5/8" | 1 1/8" | 5/8" | 1 1/4 x 3/4" | 3/4" | 4 x 2 1/4" | 5/8" | 21 | 12 | Cepam |
| 4 | Home and Garage | 4" | 4" | 7 3/8" | 1 1/8" | 5/8" | 1 1/2 x 3/4" | 3/4" | 4 1/2 x 2 3/8" | 5/8" | 30 | 12 | Cepina |
| 5 | Garage and Shop | 5" | 7" | 8 3/4" | 1 5/8" | 3/4" | 1 3/4 x 1" | none | 5 x 3" | 3/4" | 65 | 1 | Cepinis |
| 6 | Garage and Shop | 6" | 8" | 10 1/8" | 2" | 1" | 2 x 2" | none | 6 1/2 x 4 3/4" | 3/4" | 120 | 1 | Ceppo |

CHAMPION BALL BEARING OR RING OILING SAW MANDRELS



Standard Saw Mandrel

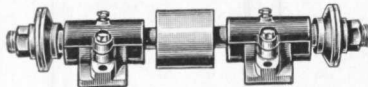
Champion Saw Mandrels are extra heavy, and are fitted with rigid Ring Oiling Pillow Blocks which construction insures adequate oiling.

The Arbors are built of high grade machinery steel, fitted with heavy flanges. Pulleys are crowned and are always shipped on left-hand side when saw is running towards you, with left-hand thread unless otherwise ordered. Pulley can be furnished on right-hand side or on center if specially ordered.

Saw Mandrels can be furnished with Ball Bearings at extra cost.

Saw Mandrels can be furnished both ends threaded at extra cost.

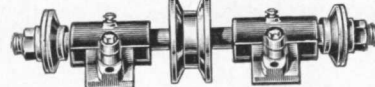
Saw Mandrels furnished at no extra cost with pulley for V-belt.



Mandrel threaded both ends

| Number of Mandrel | Diam. of Pulley | Face of Pulley | Diam. of Flange | Diam. of Shaft | Hole in Saw | Length of Shaft | Net Weight | Code |
|-------------------|-----------------|----------------|-----------------|----------------|-------------|-----------------|------------|----------|
| 000 | 2 | 1 1/2 | 2 | 1 1/8 | 1 1/8 | 12 | 7 lbs. | Sopitar |
| 00 | 2 | 2 1/2 | 2 | 1 1/8 | 1 1/8 | 12 | 8 lbs. | Sopited |
| 0 | 2 | 3 | 2 1/2 | 1 1/8 | 1 1/8 | 14 | 14 lbs. | Sopitore |
| 1 | 2 1/2 | 3 1/2 | 3 | 1 1/8 | 1 1/8 | 20 | 22 lbs. | Sopiunt |
| 2 | 3 | 4 | 3 | 1 1/8 | 1 1/8 | 23 | 30 lbs. | Soplar |
| 3 | 3 1/2 | 4 1/2 | 3 1/2 | 1 1/8 | 1 1/8 | 25 | 35 lbs. | Sopletes |
| 4 | 4 | 5 | 4 1/2 | 1 1/8 | 1 1/8 | 28 | 54 lbs. | Soplonia |
| 5 | 4 1/2 | 5 1/2 | 4 1/2 | 1 1/8 | 1 1/8 | 30 | 57 lbs. | Sopolis |
| 6 | 5 | 6 | 5 | 1 1/8 | 1 1/8 | 32 | 68 lbs. | Sopor |
| 6 1/2 | 5 | 6 | 5 | 1 1/8 | 1 1/8 | 48 | 80 lbs. | Sopad |
| 7 | 5 1/2 | 6 1/2 | 5 1/2 | 1 1/8 | 1 1/8 | 34 | 70 lbs. | Soporado |
| 8 | 6 | 7 | 6 | 1 1/8 | 1 1/8 | 36 | 90 lbs. | Soporous |
| 9 | 7 | 8 | 6 | 1 1/8 | 1 1/8 | 41 | 175 lbs. | Soportar |
| 10 | 8 | 8 | 6 | 1 1/8 | 1 1/8 | 45 | 210 lbs. | Soppalso |
| 11 | 9 | 10 | 6 | 2 1/8 | 2 | 45 | 290 lbs. | Soprano |

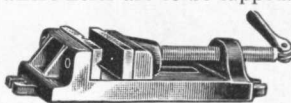
No. 000 Saw Mandrel made with Solid Cast Iron Bearings.



Saw Mandrel with V-belt pulley

CHAMPION DRILLING VISE

Champion No. 5 Drilling Vise can be bolted to the Drill Press Table; and is as rigid and solid as any Vise attached to a Bench, thereby enabling the operator to drill holes in intricate pieces and pieces that cannot be held except in a Vise. With the use of a Drilling Vise more work can be done with ease and less breakage of drill-bits. This Vise is used just as efficiently where holes are to be tapped.



Vise Jaws are 5 inches wide, 2 inches high faced with hardened steel. The stationary Jaw has V-slots. The loose Jaw swivels to take Morse Taper and opens 6 inches.

Body of Vise made of gray iron, accurately machined. The Screw is special steel, with lathe-turned threads.

No. 5 Champion Swivel Jaw Drilling Vise with 5-inch Jaw opening 6 inches. Weight 25 lbs. Code—Cefiro.



CHAMPION ANGLE BENDER FOR BENDING ANGLES, TEES, AND FLATS

No. 3

An inexpensive machine to do a variety of bending operations on angles, tees, flats, and channels. This machine is sturdily built with a supporting frame on both sides of the rolls to give greater strength. The center roll is easily removed by releasing two caps in order to remove complete circles from the machine. The machine is provided with adjustable anti-curling devices to prevent curling of angles when run through the bender singly. However, the machine is powerful enough to bend two angles at a time inserted back to back. The bender will do a great variety of bending at a fraction of the initial investment required to purchase any other power driven benders. Rolls are all adjustable, will bend angles leg out to 12" circles, leg in, to 30" circles.

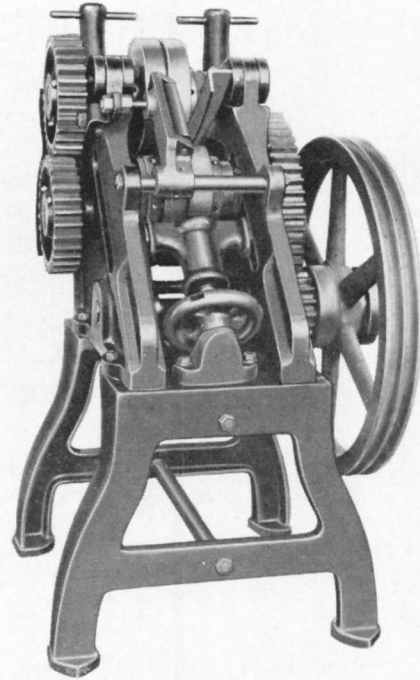
CAPACITY

| | |
|--------------|----------|
| Angle Iron | 1 1/2" |
| Tee Iron | 1 1/2" |
| Channel Iron | 4" |
| Flats | 4 x 1/4" |
| Rounds | 1" |

Pulley Speed—35 R.P.M.

H.P. Required—5

No. 3 Champion Angle Bender
furnished less pulley—700 lbs.



NO. 4 CHAMPION AMERICAN TIRE AND AXLE SHRINKER

No. 4 Champion American Tire and Axle Shrinker represents a stout, bulky and powerful machine guaranteed to shrink 4 x 1-inch round edge tire down to the smallest buggy tire and axles up to 1 1/4 inches square. It will shrink with one stroke of the lever 1 1/4 inches. The Shrinker will stand all the pounding necessary to keep down the kinks in the tire.

The jaws are made of tool steel with machine-cut teeth hardened. The jaws are worked by a mechanical lever and are thrown in and out by a simple movement of the hand.

It will be seen that the tire is gripped on its flat sides, both top and bottom, and the tire is held with a perfect grip until it is shrunk.

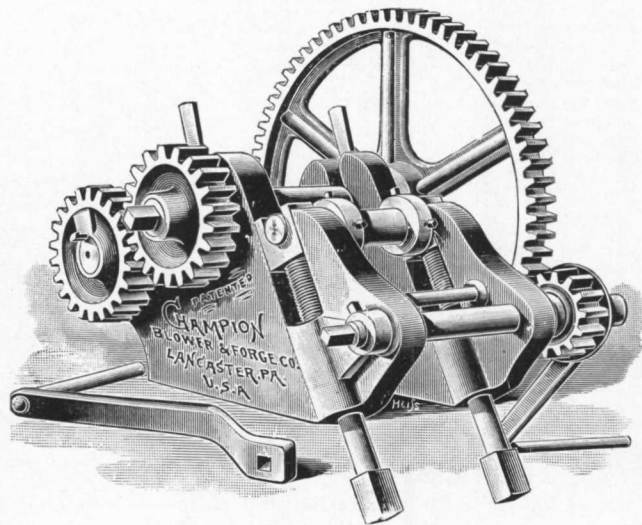
No. 4 Champion American Tire and Axle Shrinker will shrink up to 4 x 1-inch round edge tire and axles up to 1 1/4 inches, with two steel jaws 4 x 2 inches wide. Weight, 375 lbs. Code—Ferlet.

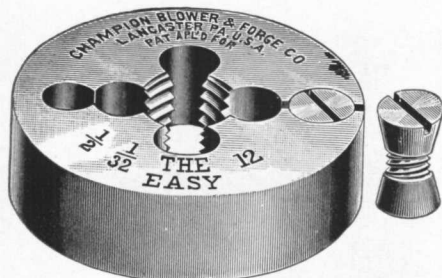
CHAMPION EUREKA TIRE BENDERS

Champion New Patent Eureka Tire Bender is a strong and powerful tool, built with all the latest improvements; adjusting screws at each end of the adjusting roll with a graduated indicator on each side of Bender, showing the exact size of the tire being bent. No more trouble to bend imperfect iron into perfect tires; the principle for getting the tire out after being bent is quick and entirely practical. The two end rolls are provided with collars to prevent the tire from twisting so both bends meet when bent. It is double back geared, and worked with two cranks which are furnished with each Bender; has two speeds, one for light and fast work and the second for heavy work.

No. 1 New Style Eureka Bender, Bends 4 x 1-Inch Tire.
Weight, 195 lbs. Code—Felt.

No. 2 New Style Eureka Bender, Bends 6 x 1-Inch Tire.
Weight, 275 lbs. Code—Feminine.





CHAMPION EASY SCREW PLATE DIE

Easy Trade Mark, Registered September 18, 1906, No. 56,390

For simplicity in construction, compactness and neatness in design, with every improvement in a Screw Plate which makes a perfect Screw at a Single Cut, the "Easy" ranks among the highest; the Die being adjustable by the use of a Taper-Head Screw with a Taper Nut.

CHAMPION EASY SCREW PLATES—With U.S. Std. Dies and Taps

Nos. 2B, 5B, 5½B, 7B and 9B Easy Sets are Furnished with TWO STOCKS. Every Set is Packed in a Hardwood Case and Furnished with an Adjustable Tap Wrench. Taper Taps Furnished.

No. 1B. 5 sizes. ¼²⁰, ⅜¹⁸, ½¹⁶, ¾¹⁴, 1¹³. Code—Feud. \$24.20
Taps. Dies 1½ inches diameter. Stock 15½ inches long.
Tap Wrench No. 2, 10½ inches long. Wt. 7½ lbs.

No. 1½B. 5 sizes. ¼²⁰, ⅜¹⁸, ½¹⁶, ¾¹⁴, 1¹³. Code—Fuet. \$28.60
Taps. Dies 1½ inches diameter. Stock, 15½ inches long.
Tap Wrench No. 2, 10½ inches long. Wt. 7½ lbs.

No. 2B. 5 sizes. ¼²⁰, ⅜¹⁶, ½¹⁵, ¾¹¹, 1¹⁰. Code—Feverfew. \$30.80
Taps. Dies First two sizes, 1½ inches diameter; larger sizes, 1½ inches diameter. Two Stocks, 15½ inches and 23 inches long. Tap Wrench No. 3, 15 inches long. Wt. 14 lbs.

No. 5B. 7 sizes. ¼²⁰, ⅜¹⁸, ½¹⁶, ¾¹⁴, 1¹³, 1½¹², 2¹⁰. Code—Finis. \$37.40
Taps. Dies First four sizes, 1½ inches diameter; larger sizes, 1½ inches diameter. Two Stocks, 15½ inches and 23 inches long. Tap Wrench No. 3, 15 inches long. Wt. 14 lbs.

No. 5½B. 8 sizes. ¼²⁰, ⅜¹⁸, ½¹⁶, ¾¹⁴, 1¹³, 1½¹², 2¹¹, 2½¹⁰. Code—Fibrous. \$41.80
Taps. Dies First four sizes, 1½ inches diameter; larger sizes, 1½ inches diameter. Two Stocks, 15½ inches and 23 inches long. Tap Wrench No. 3, 15 inches long. Wt. 15 lbs.



No. 7B. 9 sizes. ¼²⁰, ⅜¹⁸, ½¹⁶, ¾¹⁴, 1¹³, 1½¹², 2¹¹, 2½¹⁰, 3⁹. Code—Fictile. \$57.20
Taps. Dies First four sizes, 1½ inches diameter; larger sizes, 1½ inches diameter. Two Stocks, 15½ inches and 26 inches long. Tap Wrench No. 4, 20 inches long. Wt. 18 lbs.

No. 9B. 10 sizes. ¼²⁰, ⅜¹⁸, ½¹⁶, ¾¹⁴, 1¹³, 1½¹², 2¹¹, 2½¹⁰, 3⁹, 4⁸. Code—Ficarine. \$61.60
Taps. Dies First four sizes, 1½ inches diameter; larger sizes, 1½ inches diameter. Two Stocks, 15½ inches and 26 inches long. Tap Wrench No. 4, 20 inches long. Wt. 20 lbs.

CHAMPION EASY SCREW PLATES Can Be Furnished With S.A.E. Dies and Taps

CHAMPION EASY COMBINATION SCREW PLATES

With Both U. S. Standard and S. A. E. Taps and Dies

No. 11. 10 sizes. U. S. Standard, ¼²⁰, ⅜¹⁸, ½¹⁶, ¾¹⁴, 1¹³; and S.A.E. Standard, ¼²⁸, ⅜²⁴, ½²⁴, ¾²⁰, 1²⁰. Code—Fictal. \$41.80
Taps. Dies 1½ inches diameter. Stock, 15½ inches long.
Tap Wrench No. 2, 10½ inches long. Wt. 17 lbs.

No. 12. 10 sizes. U. S. Standard, ¼²⁰, ⅜¹⁸, ½¹⁶, ¾¹⁴, 1¹³; and S.A.E. Standard, ¼²⁸, ⅜²⁴, ½²⁴, ¾²⁰, 1²⁰. Code—Fidcar. \$51.70
Taps. Dies First two sizes, 1½ inches diameter; larger sizes, 1½ inches diameter. Two Stocks, 15½ inches and 23 inches long. Tap Wrench No. 3, 15 inches long. Wt. 18 lbs.

No. 15. 14 sizes. U. S. Standard, ¼²⁰, ⅜¹⁸, ½¹⁶, ¾¹⁴, 1¹³, 1½¹², 2¹¹, 2½¹⁰, 3⁹, 4⁸; and S.A.E. Standard, ¼²⁸, ⅜²⁴, ½²⁴, ¾²⁰, 1²⁰, 1½¹⁸, 2¹⁶. Code—Fiecos. \$62.70
Taps. Dies First four sizes, 1½ inches diameter; larger sizes, 1½ inches diameter. Two Stocks, 15½ inches and 23 inches long. Tap Wrench No. 3, 15 inches long. Wt. 19 lbs.

No. 15½. 16 sizes. U. S. Standard, ¼²⁰, ⅜¹⁸, ½¹⁶, ¾¹⁴, 1¹³, 1½¹², 2¹¹, 2½¹⁰, 3⁹, 4⁸, 5⁷; and S.A.E. Standard, ¼²⁸, ⅜²⁴, ½²⁴, ¾²⁰, 1²⁰, 1½¹⁸, 2¹⁶, 2½¹⁴. Code—Fifera. \$71.50
Taps. Dies First four sizes, 1½ inches diameter; larger sizes, 1½ inches diameter. Two Stocks, 15½ inches and 23 inches long. Tap Wrench No. 3, 15 inches long. Wt. 22 lbs.

No. 17. 18 sizes. U. S. Standard, ¼²⁰, ⅜¹⁸, ½¹⁶, ¾¹⁴, 1¹³, 1½¹², 2¹¹, 2½¹⁰, 3⁹, 4⁸, 5⁷, 6⁶; and S.A.E. Standard, ¼²⁸, ⅜²⁴, ½²⁴, ¾²⁰, 1²⁰, 1½¹⁸, 2¹⁶, 2½¹⁴, 3¹². Code—Figose. \$96.80
Taps. Dies First four sizes, 1½ inches diameter; larger sizes, 1½ inches diameter. Two Stocks, 15½ inches and 26 inches long. Tap Wrench No. 4, 20 inches long. Wt. 23 lbs.

Nos. 12, 15, 15½, 17 and 19 Easy Sets are Furnished with TWO STOCKS. Every set is Packed in a Hardwood Case.



No. 15½

No. 19. 20 sizes. U. S. Standard, ¼²⁰, ⅜¹⁸, ½¹⁶, ¾¹⁴, 1¹³, 1½¹², 2¹¹, 2½¹⁰, 3⁹, 4⁸, 5⁷, 6⁶; and S.A.E. Standard, ¼²⁸, ⅜²⁴, ½²⁴, ¾²⁰, 1²⁰, 1½¹⁸, 2¹⁶, 2½¹⁴, 3¹², 4¹⁰. Code—Fihigo. \$105.60
Taps. Dies First four sizes, 1½ inches diameter; larger sizes, 1½ inches diameter. Two Stocks, 15½ inches and 26 inches long. Tap Wrench No. 4, 20 inches long. Wt. 24 lbs.



No. 71.

CHAMPION SCREW PLATES

No. 70. 5 sizes. ¼⁴⁰, ⅜³², ½²⁴, ¾²⁴, 1²⁰. Code—Fining. \$19.80
Taps. Dies ½ inch in diameter. Stock 7 inches long.
Tap Wrench No. 1, 7 inches long. Wt. 3 lbs.

No. 71. 7 sizes. ¼⁴⁸, ⅜⁴⁰, ½⁴⁰, ¾³², 1²⁴, 1½²⁴, 2²⁰. Code—Fitchet. \$23.10
Taps. Dies ½ inch in diameter. Stock, 7 inches long
Tap Wrench No. 1, 7 inches long. Wt. 3½ lbs.



CHAMPION ADJUSTABLE STOCK AND DIE SETS

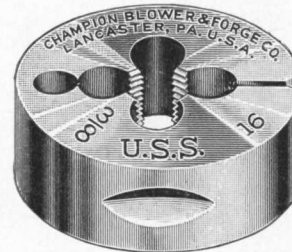


No. 1001B Set

No. 1001B Set. 5 sizes. 1½" diam. dies, cutting 120, 118, 116, 114, 112. U. S. Standard Thread. One Stock, 14" long. All mounted on Board. Code—Cellule. \$13.00

No. 1001A Set. 5 sizes. 1½" diam. dies, cutting 128, 126, 124, 122, 120. S.A.E. Standard Thread. One Stock, 14" long. All mounted on Board. Code—Celoco. \$13.00

CHAMPION ROUND ADJUSTABLE SPRING DIES



Champion Round Adjustable Spring Die is split on one side and spring tempered on the other side to allow adjustment of the die which is done by a fine pitch screw of the split side, which separates the die, or allows them to spring together. Liberal chip space is provided in the clearance holes.

U. S. Standard Thread furnished unless otherwise ordered. Left Hand Dies, sizes, dimensions not listed, and special threads are subject to special prices.

| | 1½" dia. ¼" thick | 1" dia. ⅜" thick | 1½" dia. ½" thick | 2" dia. ⅝" thick | 2½" dia. ¾" thick | 3" dia. 1" thick | | 1½" dia. ¼" thick | 1" dia. ⅜" thick | 1½" dia. ½" thick | 2" dia. ⅝" thick | 2½" dia. ¾" thick | 3" dia. 1" thick |
|---------------------------|----------------------|---------------------|----------------------|---------------------|----------------------|---------------------|-------|----------------------|---------------------|----------------------|---------------------|----------------------|---------------------|
| Machine Screw Sizes | \$1.50 | \$1.50 | | | | | | | | \$2.40 | \$4.00 | \$6.00 | |
| 1/16 | 1.50 | | | | | | 9/16 | | | 2.40 | 4.00 | 6.00 | |
| 3/32 | 1.25 | | | | | | 5/8 | | | | 4.00 | 6.00 | |
| 1/8 | 1.25 | 1.50 | | | | | 11/16 | | | | 4.00 | 6.00 | |
| 5/32 | 1.25 | 1.50 | | | | | 3/4 | | | | 4.00 | 6.00 | |
| 3/16 | 1.25 | 1.50 | | | | | 13/16 | | | | 4.00 | 6.00 | |
| 7/32 | 1.25 | 1.50 | | | | | 7/8 | | | | 4.00 | 6.00 | |
| 1/4 | 1.25 | 1.50 | \$2.40 | \$4.00 | | | 15/16 | | | | | 6.00 | |
| 5/16 | 1.25 | 1.50 | | | | | 1 | | | | | 6.00 | \$12.00 |
| 3/8 | | 1.50 | 2.40 | 4.00 | | | 1 1/8 | | | | | | 12.00 |
| 7/16 | | 1.50 | 2.40 | 4.00 | | | 1 1/4 | | | | | | 12.00 |
| 1/2 | | 1.50 | 2.40 | 4.00 | | | 1 3/8 | | | | | | 12.00 |
| | | | 2.40 | 4.00 | \$6.00 | | 1 1/2 | | | | | | 12.00 |

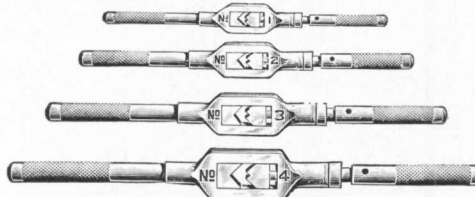
STOCKS FOR CHAMPION ROUND ADJUSTABLE SPRING DIES

Stocks for Champion Round Adjustable Spring Dies are constructed of malleable, machined and polished with knurled handles to give a firm grip. Set Screw enters the countersink in the die, holding it solid.

| Diam. of Dies, Inches | Length, Inches | Price | Diam. of Dies, Inches | Length, Inches | Price | Diam. of Dies, Inches | Length, Inches | Price |
|-----------------------------|-------------------|--------|-----------------------------|-------------------|--------|-----------------------------|-------------------|--------|
| 1 1/16 | 6 5/8 | \$2.00 | 1 1/2 | 14 | \$4.00 | 2 1/2 | 26 | \$6.00 |
| 1 | 9 | 2.50 | 2 | 18 | 5.00 | 3 | 53 | 10.00 |

CHAMPION ADJUSTABLE TAP WRENCH

The Champion Adjustable Tap Wrenches are light, strong and durable. The jaws are made of the highest grade tool steel, which centralizes the Tap in the holder, are finished, the handles are knurled. These Tap wrenches are made in eight sizes.



No. 1, 1/8 in. to 1/4 in. Length, 7 inches. Code—Federfasa... \$ 3.00
No. 2, 1/8 in. to 5/16 in. Length, 10 1/2 inches. Code—Feculences 5.00
No. 3, 1/4 in. to 3/8 in. Length, 15 inches. Code—Fecundates. 5.70
No. 4, 1/2 in. to 1 1/4 in. Length, 20 inches. Code—Filibustus.. 7.00

No. 5, 1/2 in. to 1 1/2 in. Length, 26 inches. Code—Filigrees... \$12.00
No. 6, 3/4 in. to 1 3/4 in. Length, 34 inches. Code—Fillipeens.. 16.00
No. 7, 1 in. to 2 in. Length, 40 inches. Code—Fillonse..... 24.00
No. 8, 1 1/2 in. to 2 1/2 in. Length, 54 inches. Code—Filleran... 30.00

CHAMPION PUMPMAKERS' STOCKS AND DIES



The Champion Triple Pumpmaker's Stock, with three dies complete. Cutting 116, 114, 113. \$11.00

3/16 Die and Stock, complete. \$6.00
1/16 Die and Stock, complete. 6.00
1/13 Die and Stock, complete. 6.00



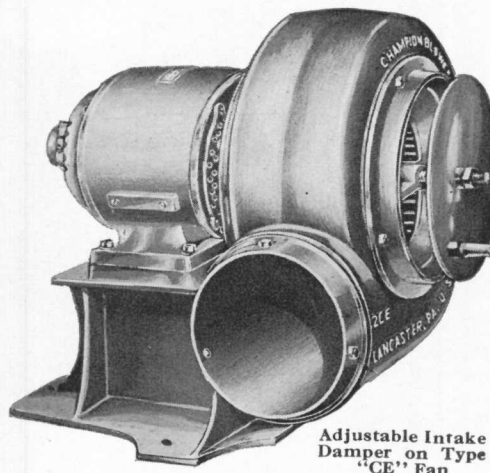
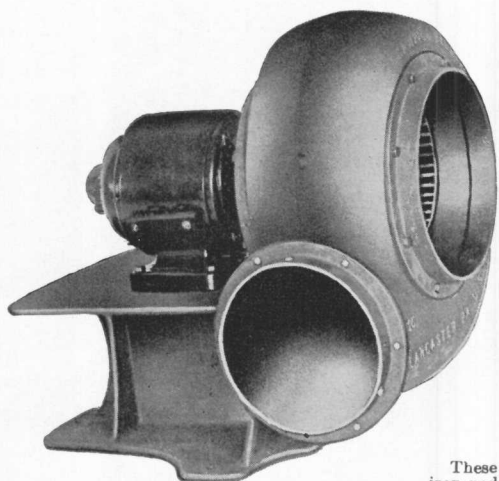
The Champion Double Pumpmaker's Stock, with two dies complete. Cutting 116, 114. \$8.50



All Pump Dies will be sent U. S. Standard thread unless otherwise ordered.



CHAMPION TYPE CE ELECTRIC-DRIVEN FORWARD CURVE FANS



Adjustable Intake
Damper on Type
"CE" Fan

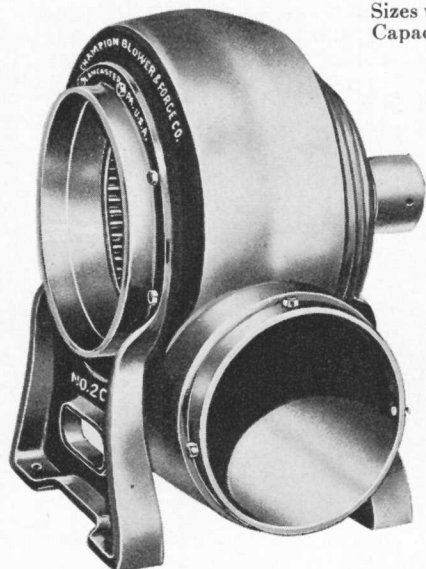
Capacity in Cubic Feet per Minute

These Fans are similar to Type C, arranged with Direct Connected Motors, mounted on a cast iron pedestal to which the Fan Case is likewise attached; making these equipments extremely rigid and durable for general blast-producing and ventilating purposes. In all other details constructed like Type C Fan. Adjustable Intake Damper can be applied to Type "CE" Fans at slight extra cost. Price on CE Electric Driven Fan without Motor on application.

| Fan No. | R.P.M. | H.P. | Free Delivery | Static Pressure | | | Height | Weight Pounds | Diameter of Wheel | Outside Diameter of Inlet | Outside Diameter of Outlet | Sq. ft. of Grate Area for Coal Burning Boiler |
|-----------|--------|-------|---------------|-----------------|------|------|---------|---------------|-------------------|---------------------------|----------------------------|---|
| | | | | 1/4" | 1/2" | 3/4" | | | | | | |
| 00-CE | 3000 | 1/50 | 60 | 45 | .... | .... | 7 1/4" | 25 | 3" | 3 1/8" | 2 1/4" | .. |
| 0-CE | 1725 | 1/20 | 160 | 125 | .... | .... | 10" | 45 | 4 1/2" | 4 5/8" | 3 3/4" | 6 |
| *1-CE | 1140 | 1/10 | 260 | 236 | .... | .... | 13" | 65 | 6" | 6" | 6" | .. |
| *1-CE | 1725 | 1/6 | 535 | 460 | 385 | 295 | 13" | 75 | 6" | 6" | 6" | 10 |
| *1 1/4-CE | 1140 | 1/6 | 750 | 565 | 400 | .... | 17" | 110 | 7 1/2" | 7 1/2" | 7 1/2" | .. |
| *1 1/4-CE | 1725 | 1/3 | 1100 | 1020 | 910 | 800 | 17" | 110 | 7 1/2" | 7 1/2" | 7 1/2" | 15 |
| 1 1/2-CE | 860 | 1/4 | 900 | 725 | .... | .... | 20 1/2" | 160 | 9" | 9" | 9" | .. |
| 1 1/2-CE | 1140 | 1/3 | 1200 | 1175 | 900 | 695 | 20 1/2" | 160 | 9" | 9" | 9" | .. |
| 1 1/2-CE | 1725 | 1 | 1900 | 1780 | 1670 | 1565 | 20 1/2" | 216 | 9" | 9" | 9" | 20 |
| 1 3/4-CE | 860 | 1/4 | 1600 | 1350 | 960 | .... | 24" | 250 | 10 1/2" | 10 1/2" | 10 1/2" | .. |
| 1 3/4-CE | 1140 | 1/2 | 2100 | 1900 | 1700 | 1440 | 24" | 250 | 10 1/2" | 10 1/2" | 10 1/2" | 25 |
| 2-CE | 690 | 1/2 | 1900 | 1600 | 1200 | .... | 28" | 315 | 12" | 12" | 12" | .. |
| 2-CE | 860 | 1/2 | 2550 | 2175 | 1900 | 1580 | 28" | 315 | 12" | 12" | 12" | .. |
| 2-CE | 1140 | 1 | 3500 | 3360 | 3000 | 2750 | 28" | 325 | 12" | 12" | 12" | 30 |
| 2 1/2-CE | 690 | 3/4 | 4000 | 3400 | 3100 | 2490 | 30" | 460 | 15" | 15 1/4" | 15" | .. |
| 2 1/2-CE | 860 | 1 1/2 | 5200 | 4400 | 4250 | 3750 | 30" | 460 | 15" | 15 1/4" | 15" | .. |
| 3-CE | 690 | 3 | 6800 | 6550 | 6200 | 5400 | 33 1/2" | 540 | 18" | 18 1/2" | 18" | .. |

Sizes with asterisk * are 48 blade wheels.

Capacities underscored are for quiet operation recommended for ventilating duty.



CHAMPION TYPE C FORWARD CURVE FANS

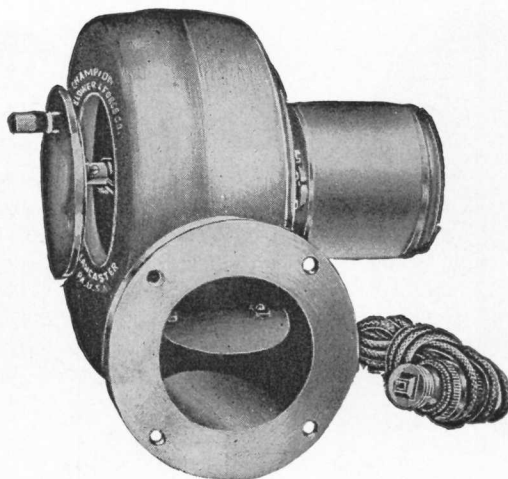
Champion Type C Fans are designed to handle a large volume of air at relatively low speed, thereby running practically silent, making them extremely serviceable for use in places where quietness is demanded.

The Housings are of cast iron, constructed that they can be adjusted for eight different discharges, either right or left hand, and the Fans are furnished with Heavy duty dust-proof Ball Bearings; making them extremely efficient and durable for all drying, cooling and ventilating purposes.

| No. of Fan | Weight Pounds | Height in Inches | Diameter of Blast Wheel | Outside Diameter of Inlet | Outside Diameter of Outlet | Diameter of Pulley | Face of Pulley |
|------------|---------------|------------------|-------------------------|---------------------------|----------------------------|--------------------|----------------|
| 00-C | 20 | 7 1/2 | 3" | 3 1/8 | 2 1/4 | 1 5/8 | 1 1/2 |
| 0-C | 40 | 10 1/8 | 4 1/2" | 4 5/8 | 3 3/4 | 2 1/2 | 1 1/2 |
| 1-C | 50 | 12 1/8 | 6" | 6" | 6" | 2 1/2 | 1 1/2 |
| 1 1/4-C | 100 | 15 1/8 | 7 1/2" | 7 1/2" | 7 1/2" | 3 1/2 | 2 1/2 |
| 1 1/4-C | 110 | 17 1/8 | 9" | 9" | 9" | 4" | 2 1/2 |
| 1 1/2-C | 200 | 20 1/2 | 10 1/2" | 10 1/2" | 10 1/2" | 4 1/2 | 3" |
| 2-C | 300 | 24 1/2 | 12" | 12 1/2" | 12 1/2" | 5" | 3 1/2 |
| 2 1/2-C | 400 | 29 1/2 | 15" | 15 1/2" | 15" | 6" | 3 1/2 |
| 3-C | 450 | 33 1/2 | 18" | 18 1/2" | 18" | 8" | 3 1/2 |



CHAMPION FORCED DRAFT COAL BLOWERS



CHAMPION BLOWERS FOR FORCED DRAFT in homes, apartments, churches, schools, hotels, hospitals—in fact any place where heating is done, will save 40% to 50% in fuel costs. Generally heating equipment does not consume all the heat in coal—with Champion Forced Draft Blower 25% less fuel is used, as the proper amount of air, i. e., 170 cubic feet of air to each pound of coal, is supplied by the Blower to use all the heating elements in the coal; and using Buckwheat coal about 50% is saved in the first cost of coal. Champion Manivane Blowers are quiet in operation and more efficient than any other type, without radio interference of any kind.

HEAT WHEN DESIRED

MORE UNIFORM HEAT than is possible with natural draft. In using a Champion Blower the draft is furnished to the fuel of the furnace or boiler when heat is required, and this forced draft means instant mechanical heat instead of waiting for heat when depending on natural draft. When draft is required the Blower instantaneously furnishes this draft, and just as quickly stops when draft is not required, eliminating waste in fuel consumption.

Damper on inlet is adjustable to provide correct amount of air needed for proper combustion of all the heat elements in the coal. Check valve in the outlet of blower closes immediately the blower stops, thereby prevents natural draft continuing thru the blower and increasing the fire.

WITH MECHANICAL DRAFT USING SMALLER SIZE COAL such as Rice, Barley, and Buckwheat, there are just as many heat units in a ton of small size coal as in a ton of the larger and more expensive coal; but to burn small size coal requires mechanical forced draft, to force the air through the coal bed, which gives complete combustion of the gases and fuel, whereas with natural draft these gases and considerable heat are carried out through chimney.

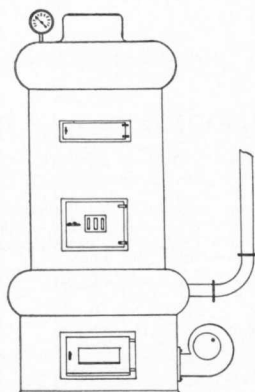
The electric current consumption is very small—practically negligible in the small sizes—and can be attached to the light socket. The Blower is only in operation when draft is needed; in severe weather hardly one-fourth of the time, and in mild weather not one-twentieth of the time.

By referring to table of capacity, we show the size Blower to use for various size grate surfaces. Champion Forced Draft Blower can be used on all types of steam, vapor and hot water boilers, and warm air furnaces.

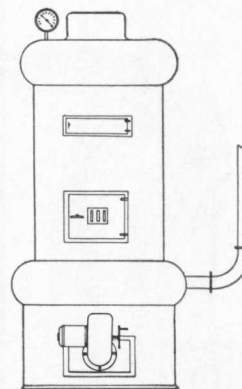
TO DETERMINE SIZE BLOWER TO USE

Figure the number of square feet of grate surface of the boiler or furnace, then use the size blower which has the capacity of the square feet grate area as indicated in the capacity table below. Place blower close to ash pit and discharge air under the grates.

No. 30 and No. 31 regularly furnished to attach to ashpit door or side wall of furnace or boiler, can be supplied with base for floor mounting, if specially ordered, at no extra cost.



No. 30 and No. 31, attached to side of furnace or boiler.



No. 30 and No. 31, attached to ash-pit door.

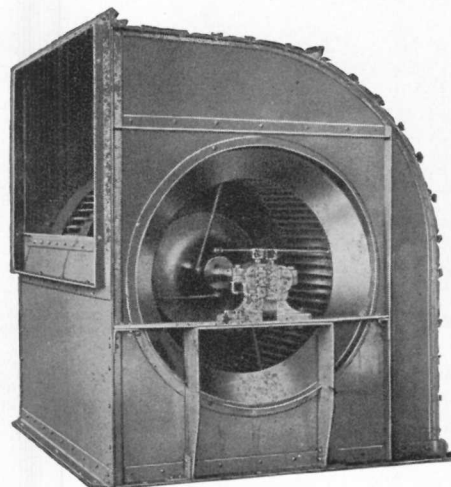
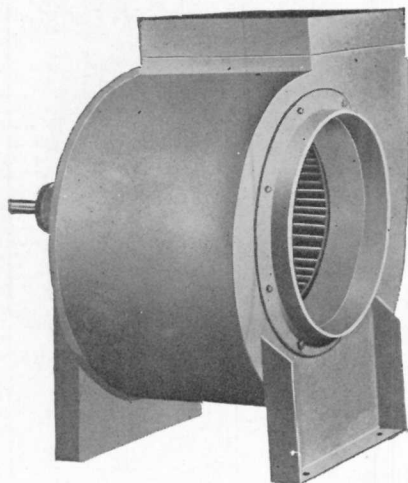
| No. Blower | R.P.M. | H.P. | Sq. Ft. Grate Area | Cu. Ft. Per Min. Free Air | Outlet | Height | Weight Lbs. |
|------------|--------|------|--------------------|---------------------------|--------|--------|-------------|
| 30 | 3000 | 1/40 | Up to 3 | 60 | 1 1/2" | 7 1/2" | 12 |
| 31 | 1750 | 1/20 | 3 to 5 | 160 | 3 1/2" | 10" | 22 |

FURNISHED WITH AC 110 VOLT MOTOR ONLY



CHAMPION TYPE S FORWARD CURVE STEEL PLATE FANS

Single Width Single Inlet and Double Width Double Inlet



Champion Type S Steel Plate Fans are specially adaptable for supplying air or for exhausting purposes; handling air, smoke, gas or fine dust directly through the fan, or for heating, cooling, ventilating or drying purposes.

HOUSING—Heavy Steel Plate, without rough edges; machine folded to provide air-tight joints, and extra strength. Housing especially large to permit proper air distribution from fan.

BEARING—All Fans provided with Ball Bearings unless otherwise specified.

WHEEL—The Improved Type, with increased blades, giving maximum efficiency and unobstructed inlet. Hub is so constructed to assist direct flow of air through the blades without loss of air.

DISCHARGE—Removing a few bolts only necessary to change discharge to any of the eight directions, on single width sizes 1 to 6, and Blower can be mounted on floor, ceiling or side wall, without any changes whatsoever.

INLET—Design of Inlet permits the air to enter Fan with the easiest flow, and at maximum capacity, without resistance of any kind. Size No. 1 to 6 inclusive have inlet and case support as shown above. Sizes larger than No. 6 have Steel Case Support as illustrated on Double Width, Double Inlet Type S Fans.

INLET AND DRIVE SUPPORT—Of the heaviest construction to guarantee rigidity, permitting the bearing unit to be attached in a most solid manner.

OUTLET—Made of Steel properly flanged to permit a tight pipe joint and drilled for bolt connection.

PULLEY—Drive is overhung, making the use of an endless belt possible and allowing easy belt removal and replacement. Shaft extended for Tex-rope drive, or flexible coupling. No Pulley included.

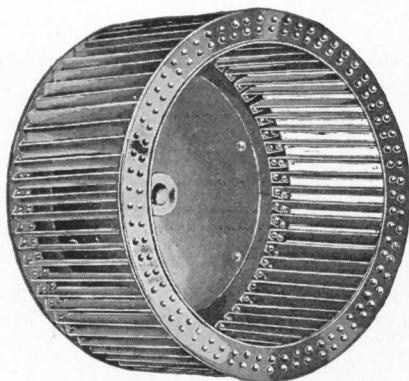
| No. of Fan | SINGLE WIDTH, SINGLE INLET | | | | DOUBLE WIDTH, DOUBLE INLET | | | |
|------------|----------------------------|-----------------------|------------------------|-------------|---------------------------------|-----------------------|------------------------|-------------|
| | Diameter of Wheel | Outside Dia. of Inlet | Outside Dia. of Outlet | Weight Lbs. | Shaft Diameter at Pulley Inches | Outside Dia. of Inlet | Outside Dia. of Outlet | Weight Lbs. |
| 1 | 6" | 6 1/2" | 6 1/2" x 4 1/2" | 60 | 5/8" | ..... | ..... | ..... |
| 1 1/4 | 7 1/2" | 7 7/8" | 7 7/8" x 6 1/2" | 82 | 3/4" | ..... | ..... | ..... |
| 1 1/2 | 9" | 9 1/2" | 9 1/2" x 7 1/8" | 85 | 3/4" | ..... | ..... | ..... |
| 1 3/4 | 10 1/2" | 11" | 10 1/2" x 8 1/8" | 110 | 3/4" | ..... | ..... | ..... |
| 2 | 12" | 12 1/2" | 12 1/2" x 10" | 155 | 1 1/8" | 12 1/2" | 12 1/2" x 16 1/2" | 200 |
| 2 1/2 | 15" | 15 1/2" | 15 1/2" x 13" | 230 | 1 1/2" | 15 1/2" | 15 1/2" x 21 3/4" | 425 |
| 3 | 18" | 18 1/2" | 18 1/2" x 14 5/8" | 310 | 1 5/8" | 18 1/2" | 18 1/2" x 24 1/4" | 500 |
| 3 1/2 | 21" | 21 1/2" | 21 1/2" x 17 1/8" | 890 | 1 5/8" | 21 1/2" | 21 1/2" x 29 1/4" | 550 |
| 4 | 24" | 25" | 24 3/4" x 19 1/2" | 500 | 1 11/16" | 25" | 24 3/4" x 33" | 750 |
| 4 1/2 | 27" | 28" | 27 1/2" x 21 3/4" | 790 | 1 11/16" | 28" | 27 1/2" x 36" | 1100 |
| 5 | 30" | 32" | 30 3/4" x 24 1/4" | 1000 | 1 15/16" | 32" | 30 3/4" x 39 7/8" | 1400 |
| 5 1/2 | 33" | 35 3/4" | 33 3/4" x 26 5/8" | 1175 | 2 1/8" | 35 3/4" | 33 3/4" x 43 1/4" | 1690 |
| 6 | 36" | 38 3/4" | 36 1/2" x 29" | 1260 | 2 1/8" | 38 3/4" | 36 1/2" x 47 1/4" | 1780 |
| 6 1/2 | 39" | 42 3/4" | 40 1/2" x 32" | 1400 | 2 1/8" | 40 1/2" | 40 1/2" x 55 3/4" | 1850 |
| 7 | 42" | 49 3/4" | 44 1/4" x 35 1/4" | 1500 | 2 1/8" | 49 3/4" | 44 1/4" x 61 3/4" | 2200 |
| 8 | 48" | 52 1/4" | 49 1/4" x 39" | 2275 | 2 1/8" | 49" | 49" x 68 1/4" | 3300 |
| 9 | 54" | 56 3/4" | 54 1/4" x 43" | 2700 | 2 11/16" | 56 3/4" | 54 1/4" x 75 1/2" | 4000 |
| 10 | 60" | 67 1/4" | 59 3/4" x 47 1/2" | 3600 | 2 15/16" | 67 1/4" | 59 3/4" x 83 1/4" | 4450 |

Mounting Motor at Factory Add 10% to Fan Prices.

Water cooled bearings extra



CHAMPION TYPE C BLAST WHEELS OR ROTORS

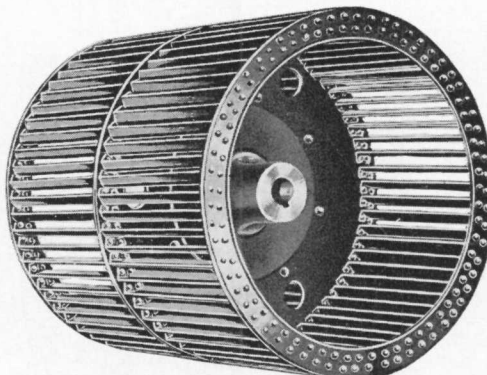


Single Width Single Inlet

Champion Type C Blast Wheel or Rotor is riveted strong and substantial with no chance of parts becoming loose; carefully balanced both dynamically and statically; free from noise or vibration.

Champion Type C Blast Wheel or Rotor has many Vanes, handling a large volume of air, carried in a continuous stream without usual air noise, as is the case where less Vanes are used—therefore makes the most desirable Rotor for Oil Burners, Stokers, and Home Heaters where excessive air noise is an objection. Made of steel throughout, which prevents buckling of vanes due to air resistance, if made of lighter weight or softer material.

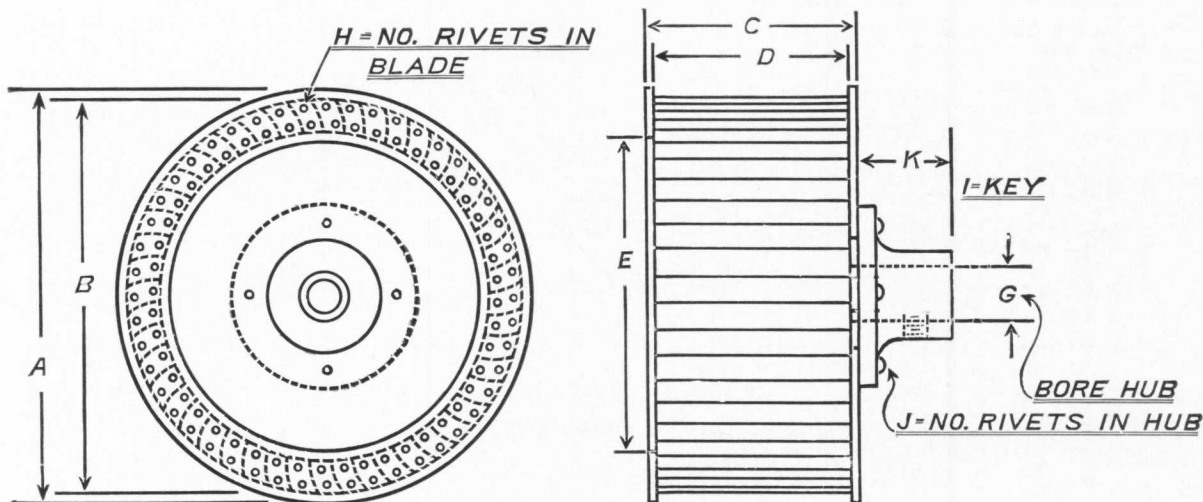
Furnished regular or narrower or wider width to operate clockwise or counter-clockwise, with regular or special hubs, either



Double Width Double Inlet

inside or outside. Outside Hub regularly furnished; inside Hub if specially ordered and with any desired bore in the hub in both Single Width Single Inlet or Double Width Double Inlet with hub in centre. Champion Type C Rotors produce best results in Champion Housings.

Prices quoted on quantities desired.



| No. | A | B | C† | D† | E | G† | H | I† | J | K* | No. Blades |
|-------|---------|---------|---------|---------|---------|--------|---|--------|----|--------|------------|
| 00 | 3 1/8" | 3" | 1 1/8" | 1" | 2 1/4" | 1" | 1 | 0 | 0 | 1" | 36 |
| 0 | 4 1/8" | 4 1/8" | 2 1/8" | 2 1/8" | 3 1/8" | 1 1/8" | 1 | 0 | 4 | 1" | 36 |
| 0 1/2 | 5" | 5" | 2 1/2" | 2 1/2" | 3 1/2" | 1 1/2" | 1 | 0 | 3 | 1" | 36 |
| 0 1/4 | 5 1/2" | 5 1/2" | 2 3/4" | 2 3/4" | 4" | 1 3/4" | 1 | 0 | 4 | 1" | 42 |
| 1-B | 6 1/4" | 6" | 3" | 3" | 4 1/4" | 2" | 2 | 0 | 4 | 1 1/2" | 48 |
| 1 | 6 1/2" | 7 1/2" | 3 1/2" | 3 1/2" | 4 1/2" | 2 1/4" | 2 | 0 | 4 | 1 1/2" | 32 |
| 1 1/2 | 7 1/8" | 9" | 4 1/8" | 4 1/8" | 5 1/8" | 2 1/2" | 2 | 1 1/8" | 8 | 1 1/2" | 48 |
| 1 1/4 | 10 1/8" | 10 1/2" | 5 1/8" | 5 1/8" | 8" | 2 3/4" | 2 | 1 1/8" | 8 | 1 1/2" | 48 |
| 2 | 12 1/2" | 12" | 6 1/2" | 6 1/2" | 10 1/2" | 3" | 2 | 1 1/2" | 8 | 2" | 64 |
| 2 1/2 | 15 1/2" | 15" | 7 1/2" | 7 1/2" | 12 1/2" | 3 1/4" | 2 | 1 3/4" | 8 | 2" | 64 |
| 3 | 18 1/2" | 18" | 9" | 9" | 15 1/2" | 3 1/2" | 2 | 2" | 8 | 2 1/2" | 64 |
| 3 1/2 | 21 1/2" | 21" | 10 1/2" | 10 1/2" | 18 1/2" | 3 3/4" | 2 | 2 1/4" | 10 | 2 1/2" | 64 |
| 4 | 24 1/2" | 24" | 12 1/2" | 12 1/2" | 20 1/2" | 4" | 2 | 2 1/2" | 10 | 2 1/2" | 64 |
| 4 1/2 | 27 1/2" | 27" | 13 1/2" | 13 1/2" | 23 1/2" | 4 1/4" | 2 | 2 3/4" | 10 | 2 1/2" | 64 |
| 5 | 30 1/2" | 30" | 15 1/2" | 15 1/2" | 26 1/2" | 4 1/2" | 2 | 3" | 12 | 3" | 64 |
| 5 1/2 | 33 1/2" | 33" | 16 1/2" | 16 1/2" | 29 1/2" | 4 3/4" | 2 | 3 1/4" | 12 | 4" | 64 |
| 6 | 36 1/2" | 36" | 18 1/2" | 18 1/2" | 31 1/2" | 5" | 2 | 3 1/2" | 14 | 6" | 64 |
| 6 1/2 | 40 1/2" | 40" | 20" | 19 1/2" | 33 1/2" | 5 1/4" | 2 | 3 3/4" | 14 | 8" | 64 |
| 7 | 44 1/2" | 44" | 21 1/2" | 21 1/2" | 37 1/2" | 5 1/2" | 2 | 4" | 16 | 8 1/2" | 64 |
| 8 | 49 1/2" | 48 1/2" | 24 1/2" | 24" | 42 1/2" | 5 3/4" | 2 | 4 1/4" | 16 | 10" | 64 |
| 9 | 54 1/2" | 54" | 27 1/2" | 27" | 47 1/2" | 6" | 2 | 4 1/2" | 24 | 12" | 64 |
| 10 | 60 1/2" | 60" | 30 1/2" | 30" | 53 1/2" | 6 1/4" | 2 | 4 3/4" | 24 | 14" | 64 |

No. 6 and larger sizes are braced construction.

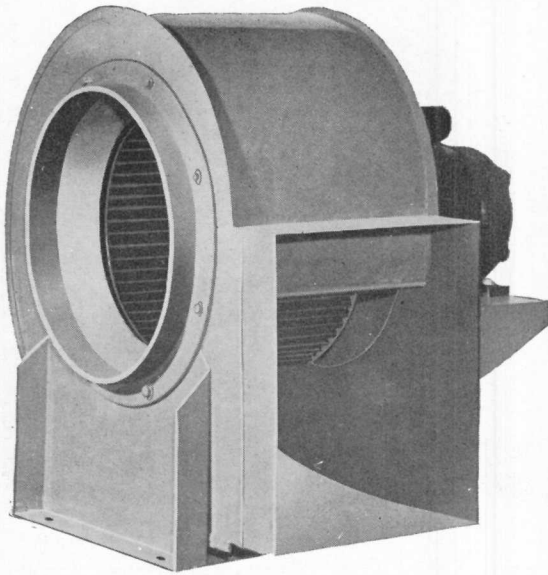
*Can be placed inside.

†Size can be changed.

Double Width and Double Inlet approximately twice Width C of Single Width Single Inlet Wheels.



CHAMPION TYPE SE ELECTRIC-DRIVEN FORWARD CURVE STEEL PLATE FANS



These Fans are similar to the Type S Steel Plate Fans, arranged with Direct-Connected motor mounted on a convenient size motor base; adjustable to fit center distance of motor to which Fan is directly attached. In all other details constructed like Type S Fans.

Capacity in Cubic Feet per Minute

| No. of Fan | R.P.M. | H.P. | Free Delivery | Static Pressure | | | Height Inches | Weight Lbs. |
|---------------------|--------|-----------------|---------------|-----------------|-----------------|-----------------|------------------|-------------|
| | | | | $\frac{1}{4}$ " | $\frac{1}{2}$ " | $\frac{3}{4}$ " | | |
| *1 SE | 1140 | $\frac{1}{20}$ | 370 | 276 | .... | .... | 11 $\frac{3}{4}$ | 75 |
| *1 SE | 1725 | $\frac{1}{6}$ | 535 | 460 | 380 | 295 | 11 $\frac{3}{4}$ | 75 |
| *1 $\frac{1}{4}$ SE | 1140 | $\frac{1}{8}$ | 750 | 565 | 400 | .... | 14 $\frac{5}{8}$ | 100 |
| *1 $\frac{1}{4}$ SE | 1725 | $\frac{1}{3}$ | 1100 | 1020 | 910 | 800 | 14 $\frac{5}{8}$ | 100 |
| *1 $\frac{1}{2}$ SE | 860 | $\frac{1}{4}$ | 900 | 725 | .... | .... | 16 $\frac{5}{8}$ | 150 |
| *1 $\frac{1}{2}$ SE | 1140 | $\frac{1}{3}$ | 1200 | 1075 | 900 | 695 | 16 $\frac{5}{8}$ | 150 |
| *1 $\frac{1}{2}$ SE | 1725 | 1 | 1900 | 1780 | 1670 | 1565 | 16 $\frac{5}{8}$ | 175 |
| 1 $\frac{3}{4}$ SE | 860 | $\frac{1}{3}$ | 1600 | 1350 | 960 | .... | 19 $\frac{1}{2}$ | 190 |
| 1 $\frac{3}{4}$ SE | 1140 | $\frac{1}{2}$ | 2100 | 1900 | 1700 | 1440 | 19 $\frac{1}{2}$ | 190 |
| 2SE | 690 | $\frac{1}{2}$ | 1900 | 1600 | 1200 | .... | 22 $\frac{1}{2}$ | 270 |
| 2SE | 860 | $\frac{1}{2}$ | 2550 | 2175 | 1900 | 1580 | 22 $\frac{1}{2}$ | 270 |
| 2SE | 1140 | 1 | 3500 | 3300 | 3000 | 2750 | 22 $\frac{1}{2}$ | 275 |
| 2 $\frac{1}{2}$ SE | 690 | $\frac{3}{4}$ | 4000 | 3400 | 3100 | 2490 | 27 | 390 |
| 2 $\frac{1}{2}$ SE | 860 | 1 $\frac{1}{2}$ | 5200 | 4400 | 4250 | 3750 | 27 | 390 |
| 3SE | 690 | 3 | 6800 | 6550 | 6200 | 5400 | 32 | 600 |
| 3SE | 860 | 7 $\frac{1}{2}$ | 11115 | 10670 | 9710 | 8300 | 32 | 600 |
| 3 $\frac{1}{2}$ SE | 690 | 7 $\frac{1}{2}$ | 12515 | 11430 | 10310 | 9680 | 37 | 700 |
| 3 $\frac{1}{2}$ SE | 860 | 10 | 14600 | 13210 | 12120 | 11400 | 37 | 750 |
| 4SE | 690 | 10 | 16900 | 15300 | 14680 | 13200 | 42 | 800 |

Sizes with asterisk have 48-blade wheel.

Capacities underscored are recommended for quiet operation and ventilating duty. Other capacities should only be used for heavy industrial work on account of excessive noise.

Sizes other than those listed are not recommended for direct connected motor mounting.



CHAMPION TYPE F FORWARD CURVE FANS

MADE IN SINGLE WIDTH—SINGLE INLET AND DOUBLE WIDTH—DOUBLE INLET

Type F Fans are suitably adapted for heating, cooling, drying, air-conditioning and ventilating systems.

WHEELS are the improved type with increased number of blades, giving maximum efficiency—running quiet at all speeds with minimum horsepower.

HOUSING is substantial, rolled bead edges, absolutely leak-proof.

BEARINGS are oscillating-self-aligning Bronze type, silent and durable, at all speeds.

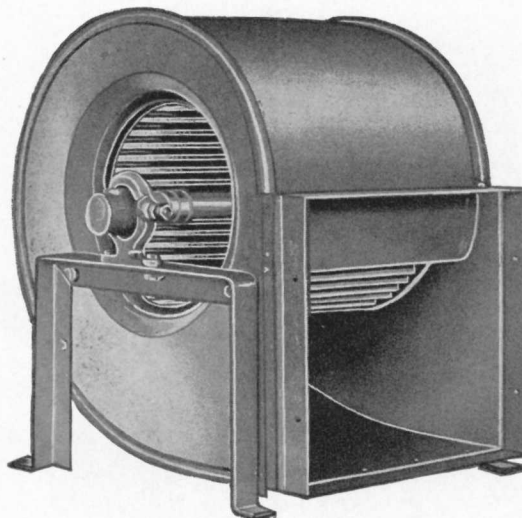
DISCHARGE is bottom horizontal as illustrated, but can be any discharge required. Pulley can be attached to either side, making all F Fans clockwise or counter-clockwise.

INLET is pressed steel, stream-lined to operate efficiently and quietly.

STANDS are rigid angle steel bolted to fan case, supporting self-aligning bearing supports.

OUTLET made of steel properly flanged to permit a tight pipe joint all drilled for bolt connection.

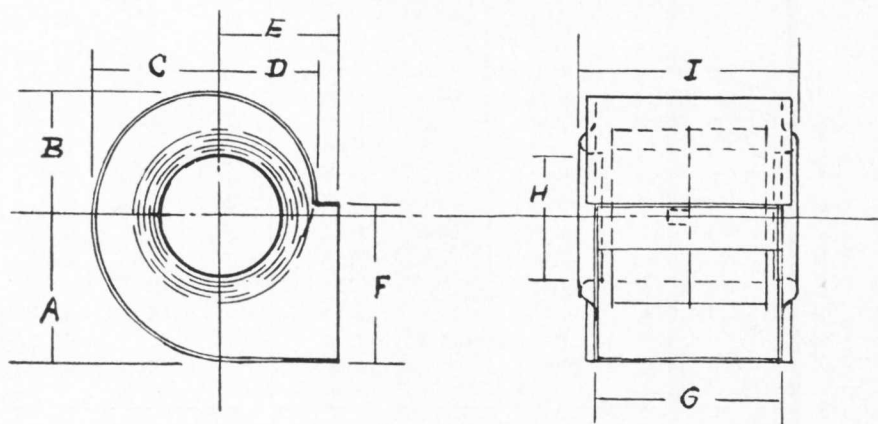
PULLEY is overhung, permitting the use of endless belt or motor connections. Pulley not furnished.



| Single Width | | | | Double Width | | | Height Inches | Diam. Wheel | Diam. Inlet |
|---------------|----------------|-----------------|-------------------|----------------|-----------------|---------------|------------------|----------------|----------------|
| No. of Fan | Weight Lbs. | Size Outlet | Diam. of Wheel | Weight Lbs. | Size Outlet | Shaft Dia. | | | |
| 1 3/4 F | 55 | 10 1/4 x 8 1/8 | 10 1/2" | 115 | 10 1/4 x 14 1/4 | 3/4" | 19 1/2 | 10 1/2 | 11 |
| 2 F | 135 | 12 3/8 x 9 1/2 | 12" | 150 | 12 3/8 x 15 1/8 | 1" | 22 | 12 | 12 1/2 |
| 2 1/2 F | 185 | 15 3/8 x 12 1/2 | 15" | 250 | 15 3/8 x 19 1/8 | 1 1/8" | 27 | 15 | 15 |
| 3 F | 275 | 18 3/8 x 14 1/4 | 18" | 320 | 18 3/8 x 23 1/4 | 1 3/8" | 32 | 18 | 18 1/2 |
| 3 1/2 F | 320 | 21 3/8 x 17 1/8 | 21" | 420 | 21 3/8 x 27 1/4 | 1 5/8" | 37 | 21 | 21 1/4 |
| 4 F | 430 | 24 3/8 x 19 1/8 | 24" | 525 | 24 3/8 x 31 3/8 | 1 7/8" | 42 | 24 | 25 |
| 4 1/2 F | 550 | 27 3/8 x 21 1/8 | 27" | 725 | 27 3/8 x 35 1/8 | 1 11/16" | 48 | 27 | 28 |
| 5 F | 800 | 30 1/8 x 24 1/4 | 30" | 900 | 30 1/8 x 39 1/2 | 1 13/16" | 52 | 30 | 32 |

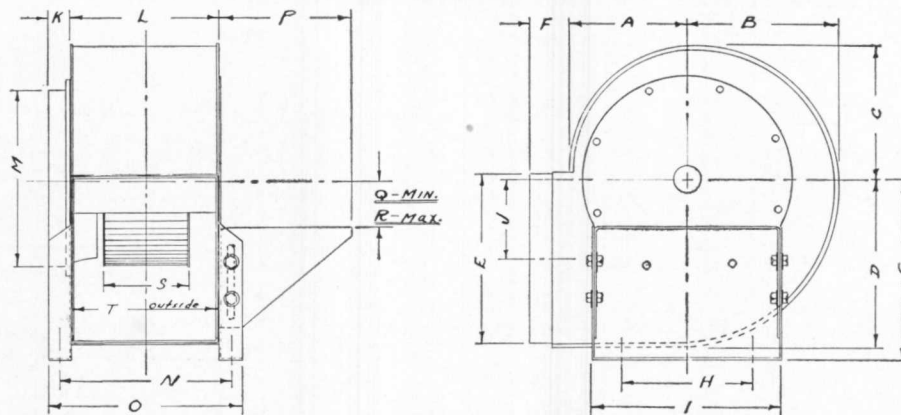
CHAMPION TYPE FX FORWARD CURVE CASES AND WHEELS

DOUBLE WIDTH, DOUBLE INLET ESPECIALLY ADAPTED FOR HEATING,
VENTILATING AND AIR-CONDITIONING



| Size | A | B | C | D | E | F | G | H | I | Diameter Wheel |
|-------|--------|--------|---------|--------|--------|--------|----------|--------|---------|-------------------|
| 0 | 4 1/2 | 3 1/2 | 4 1/2 | 3 | 4 1/2 | 5 | 5 1/4 | 3 3/8 | 6 3/4 | 4 1/2" |
| 1 | 6 5/8 | 5 1/2 | 5 7/8 | 4 3/8 | 6 7/8 | 6 1/2 | 6 3/4 | 4 7/8 | 8 | 6 |
| 1 1/4 | 7 1/2 | 5 3/4 | 6 5/8 | 5 1/8 | 7 1/8 | 7 1/2 | 8 1/4 | 6 1/4 | 9 3/4 | 7 1/2" |
| 1 1/2 | 8 1/2 | 6 3/4 | 7 13/16 | 5 3/4 | 7 3/4 | 9 9/16 | 11 5/8 | 7 1/2 | 13 5/16 | 9 |
| 1 3/4 | 11 1/2 | 8 1/2 | 9 3/4 | 7 1/8 | 9 7/8 | 11 | 14 3/8 | 9 | 16 | 10 1/2" |
| 2 | 12 1/4 | 9 1/2 | 10 3/4 | 8 1/8 | 10 7/8 | 12 5/8 | 15 7/8 | 10 3/4 | 17 1/2 | 12 1/2" |
| 2 1/2 | 14 1/8 | 11 1/4 | 12 7/8 | 9 5/8 | 13 3/8 | 15 5/8 | 19 7/8 | 12 7/8 | 21 1/2 | 15" |
| 3 | 17 3/8 | 13 3/8 | 15 3/8 | 11 3/4 | 15 | 18 5/8 | 21 15/16 | 15 1/2 | 23 3/4 | 18" |

CHAMPION TYPE SE FAN ARRANGEMENT NO. 4



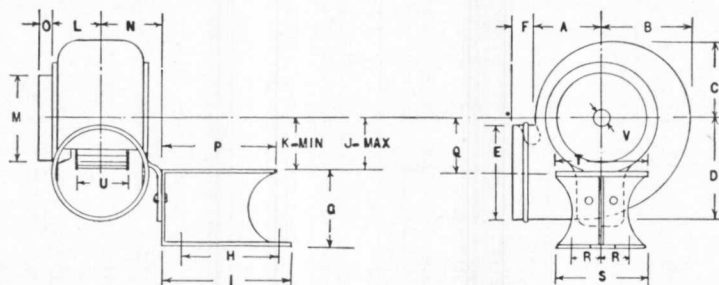
| SIZE | A | B | C | D | E | F | G | H | I | J | K | L |
|-------|--------|--------|--------|--------|--------|-------|--------|--------|--------|----------|-------|--------|
| 1 | 5 | 6-1/4 | 5-1/2 | 6-3/4 | 6-1/8 | 2 | 8-1/4 | 5-3/4 | 7-5/8 | 3-11/16 | 1-1/4 | 4-5/8 |
| 1-1/4 | 5-1/2 | 7 | 6-1/8 | 7-1/4 | 7-5/8 | 2 | 10 | 7-5/8 | 9-1/2 | 4-3/16 | 1-1/2 | 6-1/8 |
| 1-1/2 | 6-3/8 | 8-1/4 | 7-1/4 | 9-1/2 | 9-3/16 | 2-3/4 | 11-3/4 | 9 | 10-7/8 | 4-21/32 | 1-1/2 | 7-1/4 |
| 1-3/4 | 7-1/2 | 10-1/4 | 9-1/8 | 11-1/2 | 10-1/2 | 2-3/4 | 12 | 11-1/8 | 13 | 6-1/8 | 1-1/2 | 8-1/8 |
| 2 | 8-1/2 | 11 | 9-1/2 | 12-7/8 | 12-1/2 | 2-3/4 | 13-7/8 | 9-1/4 | 15-1/4 | 6-5/8 | 1-1/2 | 10 |
| 2-1/2 | 10 | 13-1/4 | 11-1/2 | 14-1/2 | 15-1/4 | 3-3/4 | 16-1/8 | 11-1/2 | 18 | 7 | 2 | 13 |
| 3 | 12 | 15-3/4 | 13-3/4 | 17-3/4 | 18-1/8 | 3-3/4 | 18-7/8 | 13-1/8 | 21-1/8 | 8-11/16 | 2-1/2 | 14-5/8 |
| 3-1/2 | 14 | 18-1/4 | 16-1/4 | 20-1/2 | 21-1/4 | 3-3/4 | 22-1/8 | 16-1/8 | 24-1/2 | 9-7/8 | 2-1/2 | 17-1/8 |
| 4 | 15-3/4 | 20-3/4 | 18-1/4 | 23-1/4 | 24-3/8 | 3-3/4 | 25 | 20 | 28-3/4 | 10-15/16 | 3 | 19-1/4 |

| SIZE | M | N | O | P | Q | R | S | T | WHEEL DIA. | BOLT HOLES | WHEEL BORE* | KEY |
|-------|--------|--------|--------|----|-------|-------|--------|--------|------------|------------|-------------|-----|
| 1 | 6-1/2 | 6-3/4 | 8-5/8 | 9 | 2-1/2 | 5 | 3 | 4-1/2 | 6 | 7/16 | 1/2 | |
| 1-1/4 | 7-7/8 | 8-1/4 | 10-1/8 | 10 | 3 | 6-1/2 | 3-3/4 | 6 | 7-1/2 | 7/16 | 1/2 | |
| 1-1/2 | 9-1/2 | 9-3/8 | 11-1/4 | 11 | 3 | 7 | 4-1/2 | 7 | 9 | 7/16 | 5/8 | 1/8 |
| 1-3/4 | 11 | 10-1/4 | 12-1/8 | 12 | 4 | 8 | 5-1/4 | 8 | 10-1/2 | 9/16 | 1 | 1/4 |
| 2 | 12-1/2 | 12-1/8 | 14 | 14 | 4-1/2 | 9 | 6 | 9-7/8 | 12 | 9/16 | 1 | 1/4 |
| 2-1/2 | 15-1/4 | 15-1/8 | 17 | 15 | 5 | 10 | 7-1/2 | 12-7/8 | 15 | 9/16 | 1 | 1/4 |
| 3 | 18-1/2 | 17-1/4 | 19-5/8 | 18 | 5-1/2 | 11 | 9 | 14-1/2 | 18 | 9/16 | 1-3/16 | 1/4 |
| 3-1/2 | 21-1/4 | 19-3/4 | 22-1/8 | 22 | 5-1/2 | 12 | 10-1/2 | 17 | 21 | 9/16 | 1-3/16 | 1/4 |
| 4 | 25 | 21-7/8 | 24-1/4 | 27 | 6 | 13 | 12 | 19-1/8 | 24 | 9/16 | 1-3/16 | 1/4 |

DIMENSIONS ARE IN INCHES.

*** ANY BORE CAN BE SUBSTITUTED

CHAMPION TYPE CE FAN ARRANGEMENT NO. 4

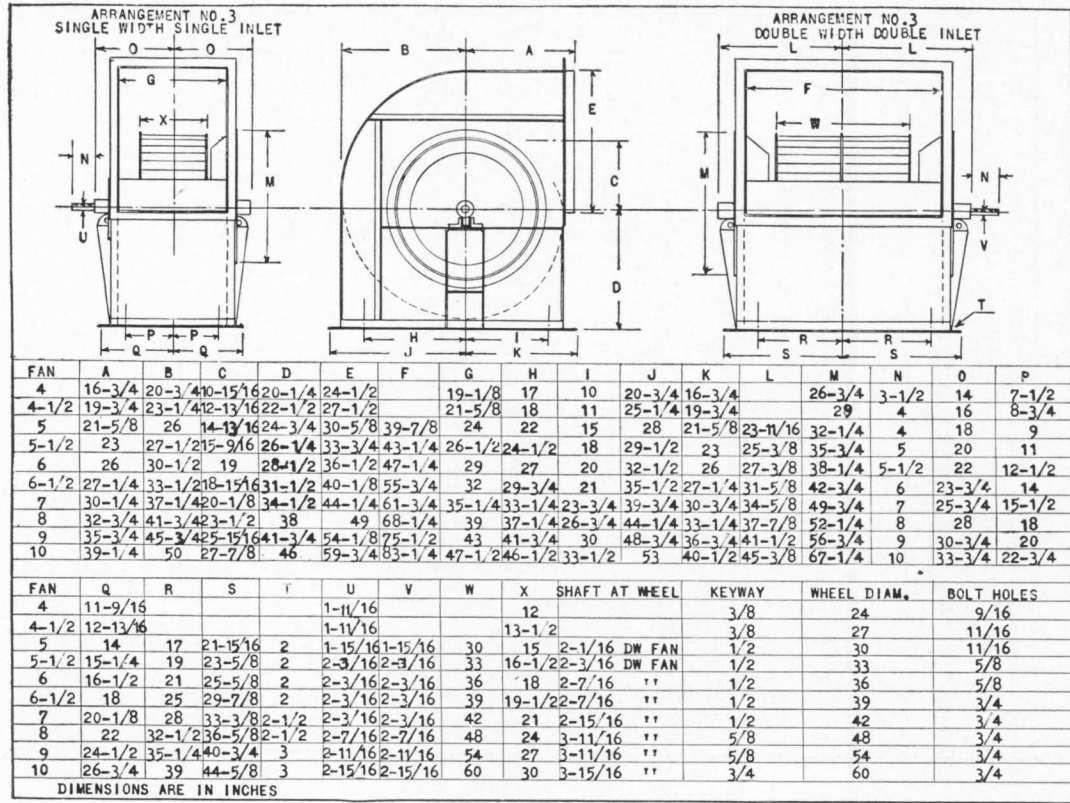
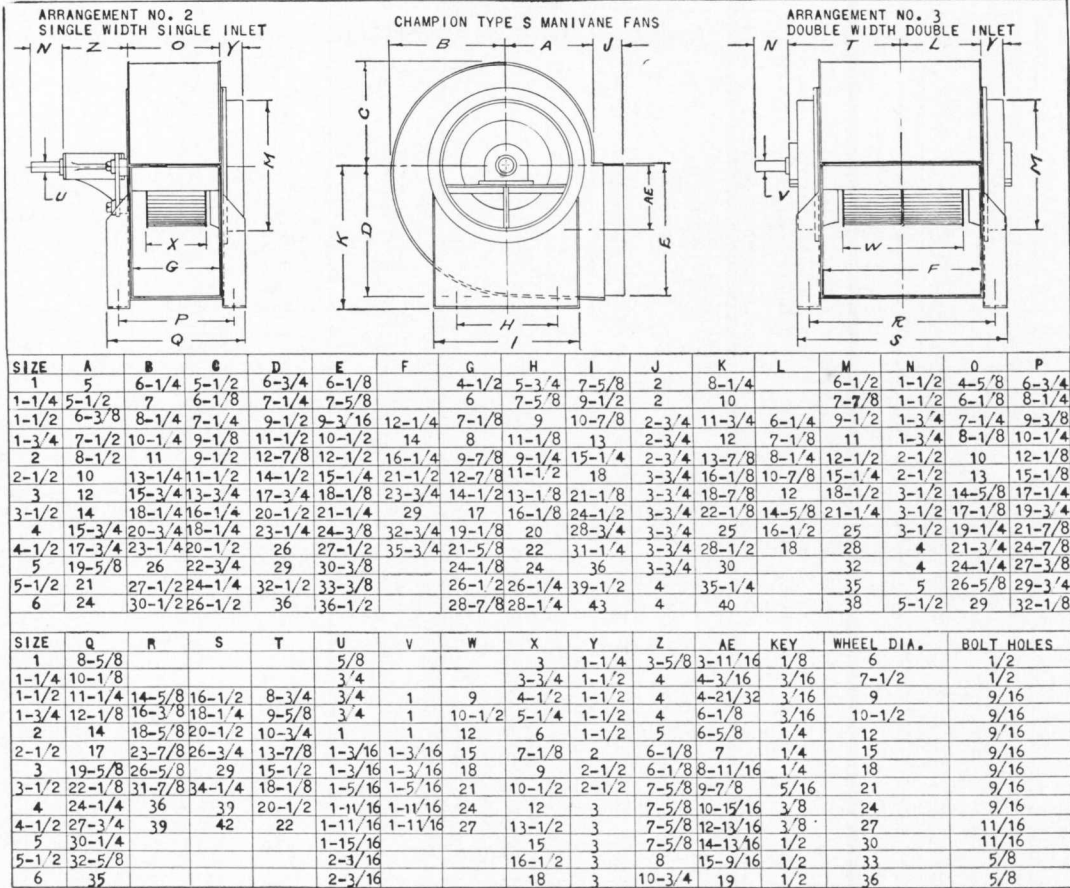


| FAN | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P |
|-------|--------|--------|--------|--------|--------|-------|-------|--------|--------|-------|-------|-------|--------|-------|-------|--------|
| 00 | 2-1/4 | 3 | 2-3/4 | 3-1/4 | 2-1/4 | 1-1/2 | 1-3/4 | 3-1/2 | 5-1/2 | 2-3/4 | 1-3/4 | 1-1/4 | 3-1/8 | 2 | 3/4 | 4-3/4 |
| 0 | 3-1/4 | 4-1/2 | 4 | 4-5/8 | 3-3/4 | 1-5/8 | 3-1/8 | 4 | 6 | 3-5/8 | 2-1/8 | 1-7/8 | 4-5/8 | 2-1/2 | 3/4 | 6-1/8 |
| 1 | 4-1/8 | 5-3/8 | 4-7/8 | 6-1/2 | 6 | 1-1/8 | 5 | 7 | 9 | 4-1/2 | 2-1/4 | 2-2/8 | 6 | 4 | 3/4 | 7-1/4 |
| 1-1/4 | 5 | 6-3/4 | 6 | 8-1/8 | 7-1/2 | 1-1/4 | 6 | 9-1/2 | 11 | 4-1/2 | 3-1/4 | 3-3/8 | 7-1/2 | 4-3/4 | 1 | 8-1/4 |
| 1-1/2 | 6 | 8-1/8 | 7-1/8 | 9-3/8 | 9 | 1-3/8 | 7-1/2 | 10 | 13 | 5-1/4 | 3-1/4 | 4-1/8 | 9 | 5-3/8 | 1-1/4 | 10-3/4 |
| 1-3/4 | 6-7/8 | 9-1/2 | 8 | 11-1/8 | 10-1/2 | 1-5/8 | 9 | 12 | 15-1/4 | 6-3/4 | 3-1/4 | 4-3/4 | 10-1/2 | 6 | 1-3/8 | 13-1/2 |
| 2 | 7-3/4 | 11-1/8 | 9-1/2 | 12-1/2 | 12 | 1-3/4 | 10 | 14-1/2 | 17-3/4 | 7-1/4 | 4-1/2 | 5 | 12 | 6-1/2 | 1-1/2 | 14-7/8 |
| 2-1/2 | 11 | 15 | 13 | 16 | 11-1/2 | 2 | 10 | 14 | 18 | 9-1/4 | 6-3/4 | 5-3/8 | 15-1/4 | 7 | 1-1/2 | 17 |
| 3 | 12-3/8 | 17 | 14-1/2 | 18-1/2 | 13-1/2 | 2-3/8 | 13 | 19 | 23-1/2 | 9-1/2 | 6-3/4 | 6-1/4 | 18-1/2 | 7-3/4 | 1-1/2 | 21-3/4 |

| FAN | Q | R | S | T | U | V | WHEEL DIAM. | BOLT HOLES | WHEEL BORE* | KEYWAY | NO. OF BLADES |
|-------|--------|-------|-------|--------|-------|-------|-------------|------------|-------------|--------|---------------|
| 00 | 2-1/8 | 2 | 6 | 6 | 1-1/2 | 3/4 | 3 | 7/16 | 3/8 | | 36 |
| 0 | 2-3/4 | 2-1/4 | 6-1/2 | 6-3/4 | 2-1/4 | 1-1/4 | 4-5/8 | 7/16 | 1/2 | | 36 |
| 1 | 3-1/2 | 3 | 8 | 7-1/4 | 3 | 1-1/2 | 6 | 7/16 | 1/2 | | 48 |
| 1-1/4 | 4-1/4 | 4 | 10 | 9 | 3-3/4 | 1-1/2 | 7-1/2 | 7/16 | 1/2 | | 48 |
| 1-1/2 | 5-1/8 | 5 | 12 | 11-1/4 | 4-1/2 | 2 | 9 | 9/16 | 5/8 | 3/16 | 48 |
| 1-3/4 | 5-3/4 | 5-1/2 | 14 | 13-1/2 | 5-1/4 | 2 | 10-1/2 | 9/16 | 1 | 1/4 | 64 |
| 2 | 6-3/4 | 6 | 16 | 15-1/4 | 6 | 2 | 12 | 9/16 | 1 | 1/4 | 64 |
| 2-1/2 | 9-3/4 | 6 | 16 | 17 | 7-1/2 | 3 | 15 | 9/16 | 1 | 1/4 | 64 |
| 3 | 11-3/4 | 10 | 24 | 22 | 9 | 3 | 18 | 9/16 | 1-3/16 | 3/8 | 64 |

DIMENSIONS ARE IN INCHES

**ANY BORE CAN BE SUBSTITUTED





CAPACITY TABLE OF CHAMPION TYPE S FANS

SINGLE WIDTH SINGLE INLET

| Size | Volume | Outlet Velocity | ½" S. P. | | | ¾" S. P. | | | 1" S. P. | | | 1 1/8" S. P. | | | 1 1/4" S. P. | | |
|-----------|--------|-----------------|-----------|--------|--------|-----------|--------|--------|-----------|--------|--------|--------------|--------|--------|--------------|--------|--------|
| | | | Tip Speed | R.P.M. | B.H.P. | Tip Speed | R.P.M. | B.H.P. | Tip Speed | R.P.M. | B.H.P. | Tip Speed | R.P.M. | B.H.P. | Tip Speed | R.P.M. | B.H.P. |
| No. 1 | 235 | 1200 | 1800 | 1145 | .03 | 2235 | 1425 | .05 | 2620 | 1670 | .06 | 3010 | 1915 | .09 | | | |
| | 275 | 1400 | 1960 | 1240 | .05 | 2350 | 1495 | .06 | 2710 | 1725 | .08 | 3035 | 1935 | .10 | | | |
| | 315 | 1600 | 2130 | 1350 | .07 | 2480 | 1580 | .08 | 2805 | 1785 | .10 | 3110 | 1980 | .12 | 3410 | 2170 | .14 |
| | 355 | 1800 | | | | 2625 | 1670 | .10 | 2935 | 1865 | .12 | 3210 | 2040 | .14 | 3480 | 2215 | .17 |
| No. 1 1/4 | 365 | 1200 | 1750 | 890 | .05 | 2190 | 1115 | .07 | 2585 | 1320 | .10 | 2980 | 1515 | .13 | | | |
| | 430 | 1400 | 1895 | 964 | .07 | 2305 | 1173 | .09 | 2650 | 1350 | .12 | 2990 | 1520 | .15 | | | |
| | 490 | 1600 | 2040 | 1036 | .09 | 2430 | 1207 | .12 | 2755 | 1405 | .15 | 3050 | 1550 | .18 | 3350 | 1710 | .22 |
| | 550 | 1800 | | | | 2540 | 1290 | .15 | 2875 | 1465 | .18 | 3145 | 1600 | .22 | 3420 | 1745 | .26 |
| No. 1 1/2 | 530 | 1200 | 1730 | 735 | .06 | 2170 | 920 | .10 | 2555 | 1085 | .13 | 2930 | 1240 | .18 | | | |
| | 620 | 1400 | 1860 | 790 | .09 | 2270 | 960 | .12 | 2625 | 1115 | .16 | 2950 | 1250 | .21 | | | |
| | 705 | 1600 | 2000 | 850 | .12 | 2375 | 1005 | .16 | 2720 | 1155 | .20 | 3010 | 1280 | .25 | 3305 | 1405 | .30 |
| | 795 | 1800 | | | | 2500 | 1060 | .20 | 2825 | 1200 | .25 | 3110 | 1320 | .30 | 3395 | 1440 | .35 |
| No. 1 3/4 | 725 | 1200 | 1695 | 610 | .08 | 2140 | 780 | .12 | 2530 | 920 | .18 | 2910 | 1060 | .24 | | | |
| | 850 | 1400 | 1825 | 665 | .11 | 2235 | 815 | .16 | 2595 | 945 | .21 | 2920 | 1065 | .28 | | | |
| | 965 | 1600 | 1855 | 710 | .15 | 2350 | 855 | .21 | 2675 | 970 | .26 | 2980 | 1085 | .32 | 3270 | 1190 | .40 |
| | 1080 | 1800 | | | | 2455 | 875 | .26 | 2755 | 1012 | .32 | 3070 | 1120 | .40 | 3340 | 1215 | .46 |
| No. 2 | 950 | 1200 | 1585 | 505 | .09 | 2000 | 640 | .15 | 2430 | 775 | .25 | 2780 | 885 | .32 | | | |
| | 1110 | 1400 | 1705 | 545 | .12 | 2085 | 665 | .20 | 2480 | 795 | .30 | 2810 | 895 | .38 | 3110 | 990 | .45 |
| | 1260 | 1600 | 1820 | 580 | .18 | 2190 | 700 | .25 | 2500 | 795 | .30 | 2810 | 895 | .38 | 3110 | 990 | .45 |
| | 1420 | 1800 | 1945 | 620 | .22 | 2300 | 735 | .30 | 2595 | 820 | .35 | 2870 | 915 | .45 | 3140 | 1000 | .50 |
| No. 2 1/2 | 1500 | 1200 | 1585 | 405 | .15 | 2000 | 510 | .22 | 2430 | 620 | .38 | 2780 | 710 | .50 | | | |
| | 1750 | 1400 | 1705 | 435 | .20 | 2082 | 530 | .30 | 2430 | 620 | .38 | 2780 | 710 | .50 | | | |
| | 1980 | 1600 | 1820 | 465 | .28 | 2190 | 560 | .36 | 2500 | 638 | .46 | 2805 | 715 | .58 | 3110 | 795 | .70 |
| | 2235 | 1800 | 1945 | 495 | .35 | 2300 | 585 | .45 | 2595 | 660 | .56 | 2865 | 730 | .70 | 3135 | 800 | .80 |
| No. 3 | 2140 | 1200 | 1555 | 330 | .20 | 1975 | 420 | .30 | 2425 | 515 | .55 | 2745 | 580 | .65 | | | |
| | 2490 | 1400 | 1655 | 350 | .26 | 2050 | 435 | .38 | 2425 | 515 | .55 | 2745 | 580 | .65 | | | |
| | 2850 | 1600 | 1765 | 375 | .35 | 2150 | 455 | .48 | 2460 | 520 | .60 | 2770 | 588 | .76 | 3070 | 650 | .92 |
| | 3200 | 1800 | 1880 | 400 | .45 | 2245 | 475 | .60 | 2550 | 540 | .75 | 2825 | 600 | .95 | 3100 | 658 | 1.10 |
| No. 3 1/2 | 2900 | 1200 | 1555 | 285 | .28 | 1975 | 360 | .42 | 2400 | 435 | .68 | 2750 | 500 | .90 | | | |
| | 3340 | 1400 | 1655 | 300 | .36 | 2055 | 375 | .55 | 2400 | 435 | .68 | 2750 | 500 | .90 | | | |
| | 3870 | 1600 | 1765 | 320 | .48 | 2150 | 390 | .65 | 2465 | 450 | .88 | 2770 | 510 | 1.10 | 3075 | 560 | 1.30 |
| | 4360 | 1800 | 1885 | 345 | .65 | 2250 | 410 | .85 | 2550 | 465 | 1.02 | 2825 | 515 | 1.25 | 3100 | 565 | 1.50 |
| No. 4 | 3800 | 1200 | 1530 | 245 | .35 | 1950 | 310 | .50 | 2370 | 380 | .90 | 2710 | 430 | 1.10 | | | |
| | 4430 | 1400 | 1620 | 260 | .48 | 2030 | 325 | .70 | 2370 | 380 | .90 | 2710 | 430 | 1.10 | | | |
| | 5060 | 1600 | 1725 | 275 | .60 | 2120 | 340 | .90 | 2435 | 390 | 1.10 | 2730 | 435 | 1.30 | 3035 | 480 | 1.55 |
| | 5700 | 1800 | 1835 | 295 | .80 | 2205 | 350 | 1.05 | 2525 | 405 | 1.35 | 2785 | 445 | 1.60 | 3060 | 490 | 1.85 |
| No. 4 1/2 | 4810 | 1200 | 1525 | 215 | .40 | 1945 | 275 | .65 | 2370 | 335 | 1.10 | 2715 | 385 | 1.40 | | | |
| | 5610 | 1400 | 1615 | 230 | .60 | 2030 | 290 | .85 | 2370 | 335 | 1.10 | 2715 | 385 | 1.40 | | | |
| | 6410 | 1600 | 1730 | 245 | .80 | 2120 | 300 | 1.10 | 2435 | 345 | 1.35 | 2735 | 390 | 1.65 | 3040 | 430 | 2.00 |
| | 7210 | 1800 | 1835 | 260 | 1.00 | 2200 | 310 | 1.30 | 2525 | 355 | 1.65 | 2790 | 395 | 2.00 | 3060 | 435 | 2.35 |
| No. 5 | 5940 | 1200 | 1530 | 195 | .55 | 1950 | 250 | .80 | 2370 | 305 | 1.35 | 2710 | 345 | 1.70 | | | |
| | 6930 | 1400 | 1620 | 210 | .75 | 2030 | 260 | 1.10 | 2370 | 310 | 1.65 | 2735 | 350 | 2.10 | 3035 | 385 | 2.45 |
| | 7920 | 1600 | 1725 | 220 | .95 | 2120 | 270 | 1.35 | 2430 | 310 | 1.65 | 2735 | 350 | 2.10 | 3035 | 385 | 2.45 |
| | 8910 | 1800 | 1835 | 235 | 1.25 | 2200 | 280 | 1.60 | 2530 | 325 | 2.05 | 2785 | 355 | 2.45 | 3060 | 390 | 2.90 |
| No. 5 1/2 | 7200 | 1200 | 1500 | 175 | .60 | 1950 | 225 | .90 | 2375 | 275 | 1.55 | 2720 | 315 | 2.00 | | | |
| | 8400 | 1400 | 1590 | 185 | .80 | 2000 | 230 | 1.10 | 2375 | 275 | 1.55 | 2720 | 315 | 2.00 | | | |
| | 9600 | 1600 | 1690 | 195 | 1.05 | 2080 | 240 | 1.45 | 2425 | 280 | 1.90 | 2750 | 320 | 2.40 | 3035 | 350 | 2.80 |
| | 10850 | 1800 | 1795 | 210 | 1.40 | 2165 | 250 | 1.85 | 2495 | 290 | 2.30 | 2795 | 325 | 2.85 | 3065 | 355 | 3.30 |
| No. 6 | 8550 | 1200 | 1500 | 160 | .70 | 1955 | 210 | 1.10 | 2380 | 255 | 1.85 | 2725 | 290 | 2.40 | | | |
| | 9985 | 1400 | 1590 | 170 | .95 | 2010 | 215 | 1.40 | 2380 | 260 | 2.25 | 2745 | 295 | 2.85 | 3045 | 325 | 3.40 |
| | 11500 | 1600 | 1690 | 180 | 1.30 | 2080 | 220 | 1.70 | 2425 | 265 | 2.75 | 2790 | 298 | 3.30 | 3075 | 330 | 3.95 |
| | 12850 | 1800 | 1795 | 190 | 1.65 | 2165 | 230 | 2.15 | 2495 | 265 | 2.75 | 2790 | 298 | 3.30 | 3075 | 330 | 3.95 |
| No. 6 1/2 | 10435 | 1200 | 1500 | 145 | .85 | 1955 | 190 | 1.30 | 2380 | 230 | 2.30 | 2710 | 260 | 2.85 | | | |
| | 12200 | 1400 | 1595 | 155 | 1.20 | 2010 | 195 | 1.70 | 2380 | 235 | 2.75 | 2750 | 265 | 3.40 | 3030 | 290 | 4.10 |
| | 13900 | 1600 | 1690 | 165 | 1.60 | 2081 | 200 | 2.10 | 2430 | 240 | 3.35 | 2790 | 270 | 4.10 | 3050 | 295 | 4.75 |
| | 15650 | 1800 | 1800 | 175 | 2.10 | 2170 | 210 | 2.65 | 2495 | 240 | 3.35 | 2790 | 270 | 4.10 | 3050 | 295 | 4.75 |
| No. 7 | 12760 | 1200 | 1500 | 130 | 1.05 | 1950 | 170 | 1.60 | 2365 | 205 | 2.70 | 2710 | 235 | 3.55 | | | |
| | 14880 | 1400 | 1600 | 140 | 1.45 | 2010 | 175 | 2.10 | 2365 | 210 | 3.30 | 2740 | 240 | 4.20 | 3035 | 263 | 5.10 |
| | 17010 | 1600 | 1675 | 145 | 1.85 | 2080 | 180 | 2.65 | 2410 | 210 | 3.30 | 2740 | 240 | 4.20 | 3035 | 263 | 5.10 |
| | 19130 | 1800 | 1765 | 154 | 2.40 | 2180 | 190 | 3.35 | 2480 | 215 | 4.15 | 2790 | 245 | 5.00 | 3050 | 265 | 5.85 |
| No. 8 | 15550 | 1200 | 1505 | 118 | 1.30 | 1950 | 154 | 1.95 | 2365 | 185 | 3.30 | 2708 | 212 | 4.32 | | | |
| | 18150 | 1400 | 1595 | 125 | 1.75 | 2010 | 158 | 2.55 | 2365 | 190 | 4.10 | 2736 | 215 | 5.05 | 3032 | 238 | 6.20 |
| | 20750 | 1600 | 1670 | 130 | 2.25 | 2077 | 163 | 3.20 | 2420 | 190 | 4.10 | 2736 | 215 | 5.05 | 3032 | 240 | 7.10 |
| | 23350 | 1800 | 1775 | 140 | 2.95 | 2170 | 170 | 4.00 | 2485 | 195 | 5.10 | 2780 | 218 | 6.02 | 3060 | 240 | 7.10 |
| No. 9 | 19030 | 1200 | 1505 | 107 | 1.56 | 1950 | 138 | 2.38 | 2370 | 168 | 4.10 | 2710 | 192 | 5.30 | | | |
| | 22200 | 1400 | 1595 | 113 | 2.12 | 2005 | 142 | 3.10 | 2370 | 172 | 5.10 | 2735 | 194 | 6.20 | 3030 | 215 | 7.55 |
| | 25380 | 1600 | 1674 | 119 | 2.75 | 2078 | 148 | 3.95 | 2420 | 172 | 5.10 | 2735 | 194 | 6.20 | 3030 | 217 | 8.70 |
| | 28550 | 1800 | 1765 | 125 | 3.58 | 2176 | 155 | 4.95 | 2485 | 176 | 6.20 | 2780 | 197 | 7.35 | 3055 | 217 | 8.70 |
| No. 10 | 23260 | 1200 | 1505 | 97 | 1.90 | 1948 | 125 | 2.90 | 2370 | 153 | 5.00 | 2710 | 174 | 6.50 | | | |
| | 27130 | 1400 | 1595 | 103 | 2.60 | 2000 | 129 | 3.78 | 2370 | 153 | 5.00 | 2710 | 174 | 6.50 | | | |
| | 31010 | 1600 | 1675 | 108 | 3.35 | 2075 | 134 | 4.80 | 2415 | 156 | 6.10 | 2735 | 176 | 7.55 | 3035 | 195 | 9.25 |
| | 34880 | 1800 | 1765 | 113 | 4.35 | 2220 | 140 | 6.05 | 2485 | 160 | 7.58 | 2780 | 179 | 9.00 | 3060 | 197 | 10.65 |



CAPACITY TABLE OF CHAMPION TYPE BC FANS

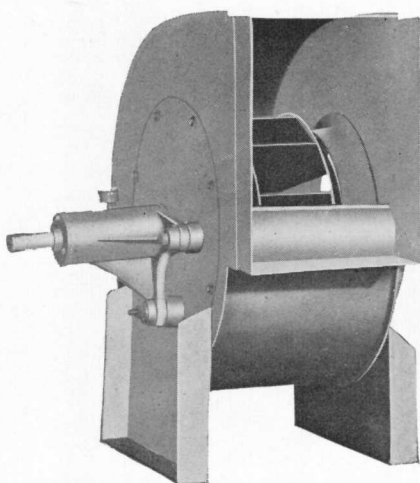
Single Width

| No. | Volume | Outlet Velocity | 1/4" S.P. | | 1/2" S.P. | | 3/4" S.P. | | 1" S.P. | | 1 1/2" S.P. | | 2" S.P. | | 2 1/2" S.P. | | 3" S.P. | | 4" S.P. | |
|-------|--------|-----------------|-----------|--------|-----------|--------|-----------|--------|---------|--------|-------------|--------|---------|--------|-------------|--------|---------|--------|---------|--------|
| | | | R.P.M. | B.H.P. | R.P.M. | B.H.P. | R.P.M. | B.H.P. | R.P.M. | B.H.P. | R.P.M. | B.H.P. | R.P.M. | B.H.P. | R.P.M. | B.H.P. | R.P.M. | B.H.P. | R.P.M. | B.H.P. |
| 2 | 840 | 1000 | 933 | .07 | 1079 | .11 | 1222 | .15 | 1356 | .20 | 1550 | .23 | | | | | | | | |
| | 1012 | 1200 | 1069 | .10 | 1189 | .14 | 1311 | .19 | 1430 | .24 | 1654 | .35 | | | | | | | | |
| | 1184 | 1400 | 1213 | .14 | 1311 | .18 | 1415 | .23 | 1523 | .29 | 1722 | .41 | 1910 | .54 | 2095 | .68 | | | | |
| | 1356 | 1600 | 1359 | .19 | 1442 | .23 | 1532 | .29 | 1624 | .34 | 1809 | .48 | 1985 | .62 | 2149 | .77 | 2310 | .92 | | |
| | 1528 | 1800 | 1514 | .25 | 1582 | .30 | 1657 | .35 | 1740 | .42 | 1907 | .56 | 2068 | .71 | 2220 | .87 | 2369 | 1.03 | 2652 | 1.38 |
| 2 1/2 | 1260 | 1000 | 761 | .10 | 880 | .16 | 996 | .22 | 1106 | .29 | | | | | | | | | | |
| | 1516 | 1200 | 872 | .14 | 970 | .21 | 1069 | .28 | 1164 | .35 | 1349 | .52 | | | | | | | | |
| | 1772 | 1400 | 989 | .20 | 1069 | .26 | 1154 | .34 | 1242 | .42 | 1405 | .61 | 1557 | .80 | 1708 | 1.01 | | | | |
| | 2028 | 1600 | 1108 | .28 | 1176 | .34 | 1249 | .42 | 1324 | .51 | 1475 | .71 | 1618 | .92 | 1752 | 1.14 | 1883 | 1.37 | | |
| | 2284 | 1800 | 1234 | .37 | 1290 | .44 | 1351 | .52 | 1419 | .61 | 1555 | .82 | 1686 | 1.05 | 1810 | 1.29 | 1932 | 1.44 | 2163 | 2.05 |
| 3 | 1880 | 1000 | 626 | .14 | 724 | .22 | 820 | .32 | 910 | .41 | | | | | | | | | | |
| | 2260 | 1200 | 718 | .20 | 798 | .29 | 880 | .39 | 960 | .50 | 1110 | .74 | | | | | | | | |
| | 2640 | 1400 | 814 | .28 | 880 | .37 | 950 | .48 | 1022 | .60 | 1156 | .86 | 1282 | 1.14 | 1406 | 1.43 | | | | |
| | 3020 | 1600 | 912 | .39 | 968 | .48 | 1028 | .60 | 1090 | .72 | 1214 | 1.01 | 1332 | 1.31 | 1442 | 1.62 | 1550 | 1.95 | | |
| | 3400 | 1800 | 1016 | .53 | 1062 | .62 | 1112 | .74 | 1168 | .88 | 1280 | 1.17 | 1388 | 1.50 | 1490 | 1.84 | 1590 | 2.18 | 1782 | 2.92 |
| 3 1/2 | 2810 | 1000 | 518 | .21 | 594 | .33 | 672 | .46 | 746 | .61 | | | | | | | | | | |
| | 3376 | 1200 | 586 | .29 | 654 | .42 | 722 | .58 | 787 | .84 | 910 | 1.09 | | | | | | | | |
| | 3942 | 1400 | 667 | .42 | 722 | .55 | 779 | .71 | 838 | .89 | 948 | 1.28 | 1051 | 1.69 | 1153 | 2.13 | | | | |
| | 4508 | 1600 | 748 | .58 | 794 | .71 | 843 | .88 | 894 | 1.07 | 995 | 1.50 | 1092 | 1.94 | 1182 | 2.41 | 1271 | 2.90 | | |
| | 5074 | 1800 | 833 | .78 | 871 | .92 | 912 | 1.10 | 958 | 1.30 | 1050 | 1.74 | 1138 | 2.23 | 1222 | 2.73 | 1304 | 3.24 | 1460 | 4.34 |
| 4 | 3440 | 1000 | 466 | .25 | 539 | .40 | 611 | .57 | 678 | .75 | | | | | | | | | | |
| | 4132 | 1200 | 535 | .36 | 595 | .52 | 656 | .71 | 715 | .91 | 827 | 1.33 | | | | | | | | |
| | 4824 | 1400 | 606 | .51 | 656 | .68 | 708 | .87 | 761 | 1.09 | 861 | 1.57 | 955 | 2.06 | 1047 | 2.60 | | | | |
| | 5516 | 1600 | 679 | .70 | 721 | .87 | 766 | 1.08 | 812 | 1.31 | 904 | 1.83 | 992 | 2.37 | 1074 | 2.95 | 1155 | 3.58 | | |
| | 6208 | 1800 | 757 | .95 | 791 | 1.13 | 828 | 1.34 | 870 | 1.59 | 954 | 2.13 | 1034 | 2.72 | 1110 | 3.33 | 1185 | 3.98 | 1326 | 5.33 |
| 4 1/2 | 4200 | 1000 | 423 | .29 | 489 | .46 | 554 | .66 | 615 | .87 | | | | | | | | | | |
| | 5044 | 1200 | 485 | .41 | 539 | .60 | 595 | .82 | 649 | 1.05 | 750 | 1.55 | | | | | | | | |
| | 5888 | 1400 | 550 | .59 | 595 | .78 | 642 | 1.01 | 691 | 1.27 | 781 | 1.82 | 867 | 2.40 | 950 | 3.02 | | | | |
| | 6732 | 1600 | 617 | .81 | 654 | 1.01 | 695 | 1.25 | 737 | 1.52 | 821 | 2.13 | 900 | 2.76 | 975 | 3.42 | 1048 | 4.13 | | |
| | 7576 | 1800 | 687 | 1.10 | 718 | 1.31 | 751 | 1.56 | 790 | 1.84 | 865 | 2.48 | 938 | 3.17 | 1007 | 3.88 | 1074 | 4.61 | 1203 | 6.18 |
| 5 | 5130 | 1000 | 381 | .35 | 441 | .56 | 499 | .80 | 554 | 1.05 | | | | | | | | | | |
| | 6160 | 1200 | 437 | .49 | 486 | .73 | 535 | 1.11 | 584 | 1.28 | 675 | 1.88 | | | | | | | | |
| | 7190 | 1400 | 495 | .71 | 535 | .95 | 578 | 1.23 | 622 | 1.54 | 703 | 2.21 | 780 | 2.92 | 856 | 3.69 | | | | |
| | 8220 | 1600 | 555 | .99 | 589 | 1.23 | 626 | 1.53 | 663 | 1.85 | 739 | 2.59 | 811 | 3.36 | 877 | 4.17 | 943 | 5.03 | | |
| | 9250 | 1800 | 618 | 1.35 | 646 | 1.60 | 677 | 1.90 | 711 | 2.25 | 779 | 3.02 | 845 | 3.86 | 907 | 4.73 | 968 | 5.61 | 1083 | 7.54 |
| 5 1/2 | 6260 | 1000 | 346 | .42 | 400 | .68 | 453 | .97 | 503 | 1.28 | | | | | | | | | | |
| | 7516 | 1200 | 397 | .61 | 441 | .89 | 487 | 1.21 | 531 | 1.60 | 614 | 2.30 | | | | | | | | |
| | 8772 | 1400 | 450 | .87 | 487 | 1.16 | 525 | 1.50 | 565 | 1.88 | 639 | 2.70 | 709 | 3.56 | 778 | 4.50 | | | | |
| | 10028 | 1600 | 503 | 1.20 | 535 | 1.50 | 568 | 1.86 | 603 | 2.26 | 671 | 3.18 | 737 | 4.12 | 797 | 5.08 | 857 | 6.14 | | |
| | 11284 | 1800 | 562 | 1.64 | 587 | 1.95 | 615 | 2.31 | 646 | 2.75 | 709 | 3.70 | 768 | 4.68 | 824 | 5.79 | 879 | 6.90 | 984 | 9.19 |
| 6 | 7640 | 1000 | 313 | .51 | 362 | .83 | 410 | 1.19 | 455 | 1.56 | | | | | | | | | | |
| | 9172 | 1200 | 359 | .74 | 399 | 1.08 | 440 | 1.47 | 480 | 1.90 | 555 | 2.80 | | | | | | | | |
| | 10704 | 1400 | 407 | 1.06 | 440 | 1.41 | 475 | 1.83 | 511 | 2.28 | 578 | 3.29 | 641 | 4.34 | 703 | 5.48 | | | | |
| | 12236 | 1600 | 456 | 1.47 | 484 | 1.83 | 514 | 2.27 | 545 | 2.75 | 607 | 3.85 | 666 | 5.00 | 721 | 6.20 | 775 | 7.48 | | |
| | 13768 | 1800 | 508 | 2.00 | 531 | 2.37 | 556 | 2.82 | 584 | 3.34 | 640 | 4.49 | 694 | 5.74 | 745 | 7.03 | 795 | 8.36 | 890 | 11.21 |
| 6 1/2 | 9330 | 1000 | 283 | .62 | 328 | 1.00 | 372 | 1.44 | 413 | 1.90 | | | | | | | | | | |
| | 11200 | 1200 | 325 | .90 | 362 | 1.32 | 399 | 1.79 | 435 | 2.31 | 503 | 3.42 | | | | | | | | |
| | 13070 | 1400 | 369 | 1.29 | 399 | 1.72 | 431 | 2.23 | 463 | 2.79 | 524 | 4.01 | 581 | 5.29 | 638 | 6.68 | | | | |
| | 14940 | 1600 | 414 | 1.79 | 439 | 2.23 | 466 | 2.77 | 493 | 3.35 | 551 | 4.72 | 604 | 6.12 | 653 | 7.55 | 703 | 9.12 | | |
| | 16810 | 1800 | 461 | 2.43 | 482 | 2.89 | 504 | 3.43 | 530 | 4.48 | 580 | 5.50 | 628 | 6.95 | 677 | 8.61 | 722 | 10.26 | 807 | 13.66 |
| 7 | 11390 | 1000 | 257 | .76 | 297 | 1.22 | 336 | 1.76 | 373 | 2.32 | | | | | | | | | | |
| | 13672 | 1200 | 294 | 1.10 | 327 | 1.61 | 361 | 2.19 | 394 | 2.82 | 455 | 4.18 | | | | | | | | |
| | 15954 | 1400 | 334 | 1.57 | 361 | 2.10 | 390 | 2.72 | 418 | 3.41 | 474 | 4.90 | 526 | 6.46 | 576 | 8.16 | | | | |
| | 18236 | 1600 | 374 | 2.18 | 397 | 2.72 | 421 | 3.38 | 446 | 4.09 | 499 | 5.76 | 546 | 7.47 | 590 | 9.22 | 636 | 11.14 | | |
| | 20518 | 1800 | 417 | 2.97 | 435 | 4.00 | 456 | 4.18 | 479 | 4.99 | 525 | 6.72 | 567 | 8.49 | 612 | 10.51 | 653 | 12.52 | 730 | 16.69 |
| 8 | 13890 | 1000 | 233 | .92 | 270 | 1.49 | 305 | 2.15 | 339 | 2.83 | | | | | | | | | | |
| | 16672 | 1200 | 267 | 1.29 | 297 | 1.96 | 328 | 2.67 | 358 | 3.45 | 413 | 5.10 | | | | | | | | |
| | 19454 | 1400 | 303 | 1.92 | 328 | 2.56 | 354 | 3.32 | 380 | 4.16 | 431 | 5.98 | 478 | 7.89 | 523 | 9.97 | | | | |
| | 22236 | 1600 | 340 | 2.66 | 361 | 3.32 | 383 | 4.12 | 405 | 5.00 | 453 | 7.04 | 496 | 9.13 | 536 | 11.26 | 577 | 13.61 | | |
| | 25018 | 1800 | 378 | 3.63 | 396 | 4.31 | 414 | 5.12 | 435 | 6.09 | 477 | 8.20 | 516 | 10.37 | 556 | 12.84 | 593 | 15.30 | 663 | 20.38 |
| 9 | 16960 | 1000 | 210 | 1.12 | 243 | 1.82 | 276 | 2.62 | 306 | 3.45 | | | | | | | | | | |
| | 23056 | 1200 | 241 | 1.63 | 268 | 2.39 | 296 | 3.26 | 323 | 4.19 | 373 | 6.22 | | | | | | | | |
| | 23752 | 1400 | 274 | 2.34 | 296 | 3.12 | 319 | 4.04 | 343 | 5.08 | 388 | 7.29 | 431 | 9.62 | 472 | 12.15 | | | | |
| | 27148 | 1600 | 306 | 3.23 | 325 | 4.05 | 345 | 5.03 | 366 | 6.09 | 409 | 8.58 | 448 | 11.13 | 484 | 13.72 | 521 | 16.59 | | |
| | 30544 | 1800 | 341 | 4.41 | 357 | 5.26 | 374 | 6.23 | 392 | 7.42 | 430 | 10.00 | 465 | 12.63 | 501 | 15.66 | 534 | 18.66 | 598 | 24.85 |
| 10 | 20690 | 1000 | 190 | 1.37 | 220 | 2.21 | 249 | 3.18 | 277 | 4.20 | | | | | | | | | | |
| | 24832 | 1200 | 218 | 1.98 | 243 | 2.90 | 268 | 3.96 | 292 | 5.11 | 337 | 7.55 | | | | | | | | |
| | 28974 | 1400 | 247 | 2.85 | 268 | 3.79 | 289 | 5.32 | 310 | 6.17 | 351 | 8.87 | 390 | 11.70 | 427 | 14.78 | | | | |
| | 33116 | 1600 | 277 | 3.94 | 294 | 4.92 | 313 | 6.11 | 331 | 7.41 | 370 | 10.43 | 405 | 13.54 | 438 | 16.70 | 471 | 20.17 | | |
| | 37258 | 1800 | 309 | 5.37 | 323 | 6.39 | 338 | 7.59 | 355 | 9.03 | 389 | 12.16 | 421 | 15.37 | 454 | 19.05 | 484 | 22.69 | 541 | 30.22 |

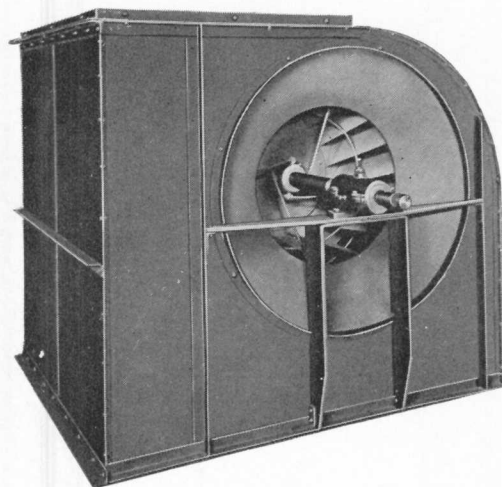


CHAMPION TYPE BC BACKWARD CURVE STEEL PLATE FANS

MADE SINGLE WIDTH SINGLE INLET AND DOUBLE WIDTH DOUBLE INLET



Single Width, Single Inlet



Double Width, Double Inlet

HOUSING—Heavy Steel Plates, rigidly braced and positively air-tight, so designed as to permit proper flow of air.

BEARINGS—All Fans provided with Ball Bearings unless otherwise specified.

WHEEL—The Improved Type BC Wheel has a Backward Curve, which maintains the same velocity throughout the entire wheel.

PULLEY—Drive is overhung making use of endless belt possible and allowing easy belt removal and replacement. Shaft extended for Tex-rope drive or flexible coupling. No pulley or coupling included.

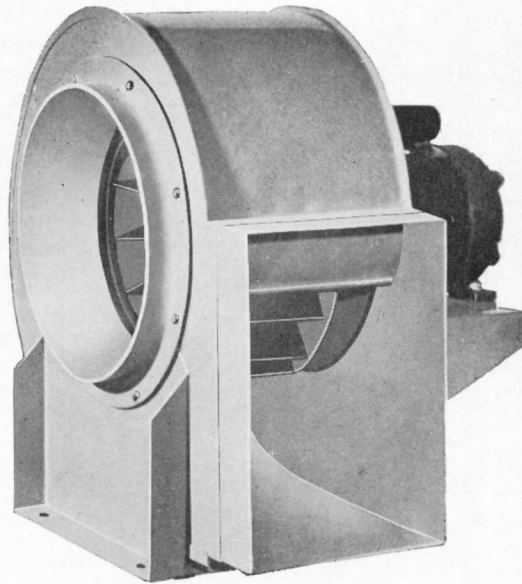
Champion Type BC Fans are specially built to meet the requirements of General Heating and Ventilating Work. The Backward Curved Blade Wheel allows a speed which permits the use of direct-connected standard speed Electric Motors. Besides the relatively high speed, the quiet operation and the non-overloading characteristics, these Fans operate at high efficiency over a wide range of ratings.

| Single Width, Single Inlet | | | | | | Double Width, Double Inlet | | | | | |
|----------------------------|-------------|-------------|-------------------|----------|-----------------------|----------------------------|-------------|-------------------|----------|-----------------------|---------------|
| Fan Size | Wheel Diam. | Inlet Diam. | Outlet | Wt. Lbs. | Shaft Diam. at Pulley | Wheel Diam. | Inlet Diam. | Outlet | Wt. Lbs. | Shaft Diam. at Pulley | Height Inches |
| 2 | 12 3/4" | 13 3/4" | 13" x 9 7/8" | 165 | 1" | 12 3/4" | 13 3/4" | 13" x 20" | 200 | 1" | 22 1/2" |
| 2 1/2 | 15" | 16" | 15 7/8" x 12" | 225 | 1 3/16" | 15" | 16" | 15 7/8" x 24" | 300 | 1 3/16" | 27" |
| 3 | 19" | 19 1/4" | 19 1/4" x 14 5/8" | 350 | 1 3/16" | 19" | 19" | 19 1/4" x 28" | 400 | 1 3/16" | 32" |
| 3 1/2 | 22 1/2" | 23" | 23 3/8" x 17 1/4" | 440 | 1 5/16" | 22 1/2" | 23" | 23 3/8" x 34" | 550 | 1 5/16" | 37" |
| 4 | 24 1/2" | 25 3/4" | 26" x 19 5/8" | 490 | 1 11/16" | 24 1/2" | 25 3/4" | 26" x 38" | 825 | 1 11/16" | 42" |
| 4 1/2 | 27" | 28" | 28 1/2" x 21 1/8" | 750 | 1 11/16" | 27" | 28" | 28 1/2" x 42" | 1025 | 1 11/16" | 48" |
| 5 | 30" | 31 1/2" | 31 3/4" x 23 3/4" | 900 | 1 15/16" | 30" | 31 1/2" | 31 3/4" x 46" | 1040 | 1 15/16" | 52 1/8" |
| 5 1/2 | 33" | 35" | 34 7/8" x 26 3/8" | 1020 | 2 3/16" | 33" | 35" | 35 1/2" x 50 3/4" | 1890 | 2 3/16" | 58 3/8" |
| 6 | 36 1/2" | 39" | 38 1/2" x 29 1/8" | 1200 | 2 3/16" | 36 1/2" | 39" | 39 1/8" x 55 1/2" | 1600 | 2 3/16" | 66" |
| 6 1/2 | 40 1/4" | 41 1/2" | 42 1/2" x 32 1/4" | 1500 | 2 3/16" | 40 1/4" | 41 1/2" | 43" x 61 1/2" | 1628 | 2 3/16" | 73 1/2" |
| 7 | 44 1/2" | 45" | 47" x 35 1/2" | 1600 | 2 3/16" | 45" | 47 1/2" | 47 1/2" x 66 1/4" | 2200 | 2 3/16" | 79 1/4" |
| 8 | 49" | 50" | 51 3/4" x 39 1/4" | 2160 | 2 7/16" | 49" | 50" | 52 1/2" x 74" | 3100 | 2 7/16" | 87 5/16" |
| 9 | 54 1/4" | 55 1/2" | 57 1/4" x 43 1/4" | 2700 | 2 11/16" | 54 1/4" | 55 1/2" | 57 3/4" x 80" | 3500 | 2 11/16" | 97 5/8" |
| 10 | 60" | 61 1/2" | 63 1/4" x 47 3/4" | 3400 | 2 15/16" | 60" | 61 1/2" | 63 3/4" x 85 1/2" | 4200 | 2 15/16" | 108 3/4" |

Mounting Motor at Factory Add 5% to Fan Price.



CHAMPION TYPE BCE ELECTRIC DRIVEN BACKWARD CURVE STEEL PLATE FANS



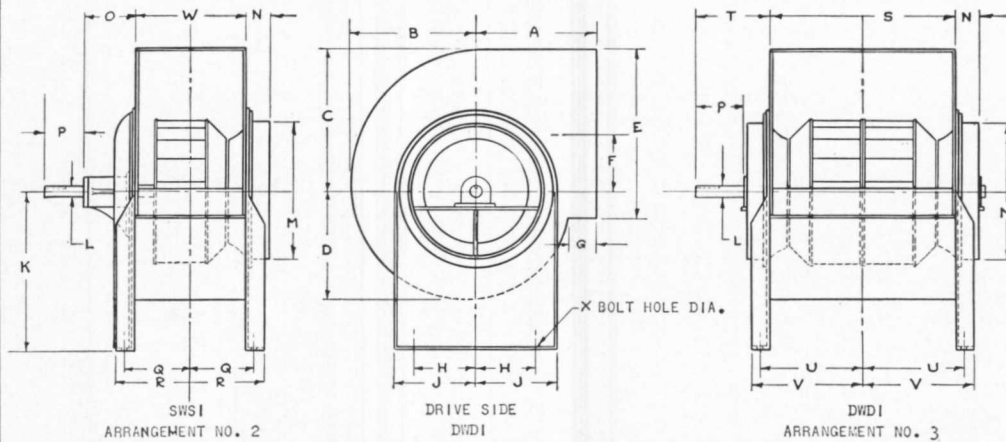
These Fans are similar to Type BC Steel Plate Fan, arranged with direct-connected motor mounted on a motor base adjustable to fit center distance of motor to which fan is attached. In all details constructed like Type BC Fan.

| Fan Size | R.P.M. | H.P. | Static Pressure | | | | | | | | Height | Weight |
|---------------------|--------|---------------|-----------------|-----------------|-----------------|-----------------|-------|-------------------|-------------------|--------------------|--------|--------|
| | | | $\frac{1}{8}$ " | $\frac{1}{4}$ " | $\frac{1}{2}$ " | $\frac{3}{4}$ " | 1" | 1 $\frac{1}{4}$ " | 1 $\frac{1}{2}$ " | | | |
| | | | C. F. M. | | | | | | | | | |
| 2BCE | 1725 | $\frac{1}{2}$ | ..... | 1766 | 1705 | 1634 | 1502 | ..... | ..... | 22 $\frac{1}{2}$ " | 220 | |
| 2BCE | 1140 | $\frac{1}{6}$ | 1201 | 1110 | 943 | 675 | ..... | ... | ..... | 22 $\frac{1}{2}$ " | 260 | |
| 2 $\frac{1}{2}$ BCE | 1725 | 1 | ..... | 3300 | 3200 | 3100 | 3000 | 2865 | 2705 | 27" | 320 | |
| 2 $\frac{1}{2}$ BCE | 1140 | $\frac{1}{2}$ | ..... | 2115 | 1985 | 1702 | 1410 | ..... | ..... | 27" | 300 | |
| 2 $\frac{1}{2}$ BCE | 860 | $\frac{1}{6}$ | 1625 | 1481 | 1205 | ..... | ..... | ..... | ..... | 27" | 300 | |
| 3BCE | 1725 | 3 | ..... | ..... | ..... | 5780 | 5685 | 5545 | 5478 | 32" | 350 | |
| 3BCE | 1140 | 1 | ..... | ..... | 3705 | 3461 | 3274 | 2868 | 2493 | 32" | 330 | |
| 3BCE | 860 | $\frac{1}{2}$ | ..... | 2825 | 2560 | 2318 | ..... | ..... | ..... | 32" | 500 | |
| 3 $\frac{1}{2}$ BCE | 1140 | 3 | ..... | ..... | 6821 | 6760 | 6518 | 6236 | 5941 | 37" | 445 | |
| 3 $\frac{1}{2}$ BCE | 860 | 1 | 5305 | 5239 | 4923 | 4651 | 4180 | 3505 | ..... | 37" | 400 | |
| 3 $\frac{1}{2}$ BCE | 690 | $\frac{1}{2}$ | 4151 | 4102 | 3674 | 2902 | ..... | ..... | ..... | 37" | 680 | |
| 4BCE | 860 | 2 | ..... | ..... | 6818 | 6561 | 5880 | 5536 | ..... | 42" | 500 | |
| 4BCE | 690 | 1 | ..... | 5589 | 5190 | 4505 | 3768 | ..... | ..... | 42" | 500 | |

Capacities underscored are recommended for Ventilating Duty and quiet operation. All other capacities for Industrial Applications or where air noise is not a factor. Sizes other than those listed are not recommended for direct-connected motor mounting.



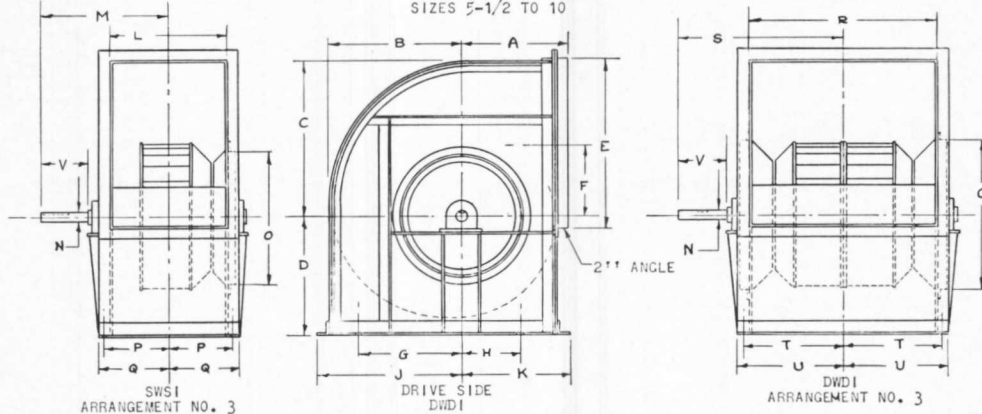
CHAMPION TYPE B C FANS
SIZES 2 TO 5



| FAN | A | B | C | D | E | F | G | H | J | K | L | M | N |
|-------|--------|--------|--------|--------|--------|---------|-------|-------|--------|--------|---------|--------|---------|
| 2 | 11-1/4 | 12-1/2 | 13-1/4 | 10-1/2 | 13 | 6-3/4 | 2-3/4 | 6-1/2 | 8 | 15-1/2 | 1 | 13-3/4 | 1-5/8 |
| 2-1/2 | 13-1/4 | 15-1/4 | 16-1/4 | 12-5/8 | 15-7/8 | 8-5/16 | 3 | 7-1/2 | 9-3/8 | 19 | 1-3/16 | 16 | 2-1/8 |
| 3 | 15-1/2 | 18-1/2 | 19-1/2 | 15-3/8 | 19-1/4 | 9-7/8 | 3-1/2 | 8-1/2 | 11-1/8 | 20-3/4 | 1-3/16 | 19 | 2-11/16 |
| 3-1/2 | 18-7/8 | 22-1/2 | 23-7/8 | 18-5/8 | 23-5/8 | 12-1/16 | 3-1/2 | 10 | 13-1/8 | 25-1/2 | 1-5/16 | 23 | 2-11/16 |
| 4 | 20-1/2 | 24-3/4 | 26-1/4 | 20-1/2 | 26 | 13-1/4 | 4 | 12 | 14-5/8 | 28 | 1-11/16 | 25-3/4 | 3-3/16 |
| 4-1/2 | 22-1/4 | 27 | 28-3/4 | 24-1/4 | 28-1/2 | 14-1/2 | 4 | 13 | 16-1/8 | 30-1/2 | 1-11/16 | 28 | 3-3/16 |
| 5 | 24-7/8 | 30 | 32 | 25 | 31-3/4 | 16-1/8 | 4 | 14 | 17-5/8 | 34-1/4 | 1-15/16 | 31-1/2 | 3-3/16 |

| FAN | Q | P | R | S | T | U | V | W | X | KEY | WHEEL DIA. |
|-------|--------|-------|---------|----------|-------|--------|--------|--------|-------|------|------------|
| 2 | 5-3/16 | 2-1/2 | 5-15/16 | 6-15/16 | 5-1/2 | 11 | 12 | 9-7/8 | 9/16 | 1/4 | 12-3/4 |
| 2-1/2 | 6-7/16 | 2-1/2 | 7 | 8 | 5-5/8 | 13 | 14 | 12 | 9/16 | 1/4 | 15 |
| 3 | 6-1/2 | 3-1/2 | 8-7/32 | 9-15/32 | 6-5/8 | 15-1/4 | 16-1/2 | 14-3/8 | 9/16 | 1/4 | 19 |
| 3-1/2 | 8-1/16 | 3-1/2 | 10-1/8 | 11-3/8 | 6-3/4 | 18-1/4 | 19-1/2 | 17-3/4 | 9/16 | 5/16 | 22-1/2 |
| 4 | 8-1/16 | 3-1/2 | 11-5/16 | 12-13/16 | 6-3/4 | 20-1/2 | 22 | 19-5/8 | 9/16 | 3/8 | 24-1/2 |
| 4-1/2 | 8-1/16 | 4 | 12-3/8 | 13-7/8 | 7-1/4 | 22-1/2 | 24 | 21-3/4 | 11/16 | 3/8 | 27 |
| 5 | 8-1/16 | 4 | 13-3/8 | 14-7/8 | 7-3/4 | 24-1/2 | 26 | 23-3/4 | 11/16 | 1/2 | 30 |

CHAMPION TYPE B C FANS
SIZES 5-1/2 TO 10



| FAN | A | B | C | D | E | F | G | H | J | K | L | M | N |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|--------|--------|---------|
| 5-1/2 | 27 | 32-3/4 | 34-3/4 | 29-1/8 | 35-1/2 | 17-5/8 | 23-1/2 | 17 | 34-3/4 | 27-1/16 | 26-7/8 | 25-5/8 | 2-1/16 |
| 6 | 29-1/2 | 36 | 38-3/8 | 31-1/2 | 39-1/8 | 19 | 26-1/2 | 20 | 38 | 29-9/16 | 29-5/8 | 27 | 2-3/16 |
| 6-1/2 | 29-5/8 | 39-3/4 | 42-1/4 | 34-7/8 | 43 | 21-1/4 | 29-1/2 | 21-1/4 | 41-3/4 | 29-5/8 | 32-3/4 | 28-1/4 | 2-3/16 |
| 7 | 32-7/8 | 44 | 46-3/4 | 38-7/8 | 47-1/2 | 28-5/8 | 33-3/4 | 24-3/4 | 46-1/2 | 33-1/2 | 36 | 30 | 2-3/16 |
| 8 | 36-5/8 | 48-1/2 | 51-1/2 | 42-5/8 | 52-1/4 | 26 | 38-1/4 | 27-1/4 | 51 | 37-1/4 | 39-3/4 | 32-3/4 | 2-7/16 |
| 9 | 40-3/8 | 53-1/2 | 57 | 47-3/8 | 57-3/4 | 28-3/4 | 42-3/4 | 30-3/4 | 56-1/2 | 41-1/2 | 43-3/4 | 36 | 2-11/16 |
| 10 | 44-1/8 | 59-1/4 | 63 | 52 | 63-3/4 | 31-3/4 | 47 | 34-1/2 | 62-1/4 | 45-1/4 | 48-1/4 | 39-1/8 | 2-15/16 |

| FAN | Q | P | R | S | T | U | V | KEY | BOLT HOLES | WHEEL DIA. |
|-------|--------|--------|--------|--------|--------|--------|--------|-----|------------|------------|
| 5-1/2 | 36-3/4 | 15-3/4 | 16-3/4 | 50-3/4 | 34-7/8 | 26-1/8 | 27-1/8 | 6 | 1/2 | 33 |
| 6 | 40-1/2 | 17 | 18 | 55-1/2 | 37 | 28-1/2 | 29-1/2 | 6 | 1/2 | 36-1/2 |
| 6-1/2 | 41-1/2 | 18-5/8 | 19-5/8 | 61-1/4 | 40-1/8 | 31-3/8 | 32-3/8 | 6 | 1/2 | 40-1/2 |
| 7 | 45-3/4 | 20 | 21-1/4 | 66-1/4 | 43-5/8 | 34-1/8 | 35-3/8 | 7 | 1/2 | 44-1/2 |
| 8 | 50-1/4 | 22-1/8 | 23-5/8 | 74 | 48-1/2 | 38 | 39-1/4 | 8 | 5/8 | 49 |
| 9 | 55-1/2 | 24-1/8 | 25-5/8 | 80 | 52-1/2 | 41-1/4 | 42-3/4 | 9 | 5/8 | 54-1/2 |
| 10 | 61-1/4 | 26-3/8 | 27-7/8 | 85-1/2 | 56 | 45-1/4 | 46-3/4 | 10 | 3/4 | 60 |



STRUCTURAL SPECIFICATIONS

TYPE S and TYPE BC FANS

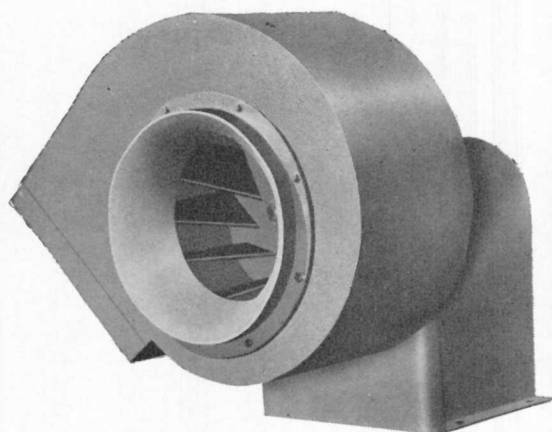
All Metal Gauges are in Accordance with the Standards
of other Fan Manufacturers

| Fan Size | Sides Ga. Stl. | Scroll Ga. Stl. | Base Angle | Side Angle | Stay Rods | Eye Bolts | Shaft Diam. at Fan Wheel | |
|-----------------|----------------|-----------------|-----------------------------------|-----------------------------------|---------------|---------------|--------------------------|-------------------|
| | | | | | | | S. W. | D. W. |
| 1 | 16 | 16 | 1 x 1 | 1 x 1 | | | $\frac{5}{8}$ | $\frac{5}{8}$ |
| 1 $\frac{1}{4}$ | 14 | 16 | 1 x 1 | 1 x 1 | | | $\frac{3}{4}$ | $\frac{3}{4}$ |
| 1 $\frac{1}{2}$ | 14 | 16 | 1 x 1 | 1 x 1 | | | $\frac{3}{4}$ | $\frac{3}{4}$ |
| 1 $\frac{3}{4}$ | 12 | 16 | 1 $\frac{1}{4}$ x 1 $\frac{1}{4}$ | 1 $\frac{1}{4}$ x 1 $\frac{1}{4}$ | | | $\frac{3}{4}$ | 1 $\frac{3}{16}$ |
| 2 | 12 | 16 | 1 $\frac{1}{4}$ x 1 $\frac{1}{4}$ | 1 $\frac{1}{4}$ x 1 $\frac{1}{4}$ | | | 1 | 1 $\frac{3}{16}$ |
| 2 $\frac{1}{2}$ | 12 | 16 | 1 $\frac{1}{4}$ x 1 $\frac{1}{4}$ | 1 $\frac{1}{4}$ x 1 $\frac{1}{4}$ | | | 1 $\frac{3}{16}$ | 1 $\frac{5}{16}$ |
| 3 | 12 | 16 | 1 $\frac{1}{2}$ x 1 $\frac{1}{2}$ | 1 $\frac{1}{4}$ x 1 $\frac{1}{4}$ | | | 1 $\frac{3}{16}$ | 1 $\frac{5}{16}$ |
| 3 $\frac{1}{2}$ | 12 | 16 | 1 $\frac{1}{2}$ x 1 $\frac{1}{2}$ | 1 $\frac{1}{4}$ x 1 $\frac{1}{4}$ | | | 1 $\frac{5}{16}$ | 1 $\frac{9}{16}$ |
| 4 | 12 | 16 | 2 x 2 | 1 $\frac{1}{2}$ x 1 $\frac{1}{2}$ | $\frac{1}{2}$ | $\frac{1}{2}$ | 1 $\frac{11}{16}$ | 1 $\frac{9}{16}$ |
| 4 $\frac{1}{2}$ | 12 | 16 | 2 x 2 | 1 $\frac{1}{2}$ x 1 $\frac{1}{2}$ | $\frac{1}{2}$ | $\frac{1}{2}$ | 1 $\frac{11}{16}$ | 1 $\frac{15}{16}$ |
| 5 | 12 | 14 | 2 x 2 | 1 $\frac{1}{2}$ x 1 $\frac{1}{2}$ | $\frac{1}{2}$ | $\frac{5}{8}$ | 1 $\frac{15}{16}$ | 2 $\frac{1}{16}$ |
| 5 $\frac{1}{2}$ | 12 | 14 | 2 x 2 | 1 $\frac{1}{2}$ x 1 $\frac{1}{2}$ | $\frac{1}{2}$ | $\frac{5}{8}$ | 2 $\frac{1}{16}$ | 2 $\frac{3}{16}$ |
| 6 | 12 | 14 | 2 x 2 | 2 x 2 | $\frac{5}{8}$ | $\frac{5}{8}$ | 2 $\frac{3}{16}$ | 2 $\frac{7}{16}$ |
| 6 $\frac{1}{2}$ | 12 | 14 | 2 x 2 | 2 x 2 | $\frac{5}{8}$ | $\frac{3}{4}$ | 2 $\frac{3}{16}$ | 2 $\frac{7}{16}$ |
| 7 | 12 | 12 | 2 $\frac{1}{2}$ x 2 $\frac{1}{2}$ | 2 x 2 | $\frac{5}{8}$ | $\frac{3}{4}$ | 2 $\frac{3}{16}$ | 2 $\frac{15}{16}$ |
| 8 | 10 | 12 | 2 $\frac{1}{2}$ x 2 $\frac{1}{2}$ | 2 x 2 | $\frac{5}{8}$ | $\frac{3}{4}$ | 2 $\frac{7}{16}$ | 3 $\frac{1}{16}$ |
| 9 | 10 | 12 | 2 $\frac{1}{2}$ x 2 $\frac{1}{2}$ | 2 x 2 | $\frac{5}{8}$ | $\frac{3}{4}$ | 2 $\frac{11}{16}$ | 3 $\frac{1}{16}$ |
| 10 | 10 | 12 | 2 $\frac{1}{2}$ x 2 $\frac{1}{2}$ | 2 x 2 | $\frac{5}{8}$ | $\frac{3}{4}$ | 2 $\frac{15}{16}$ | 3 $\frac{15}{16}$ |

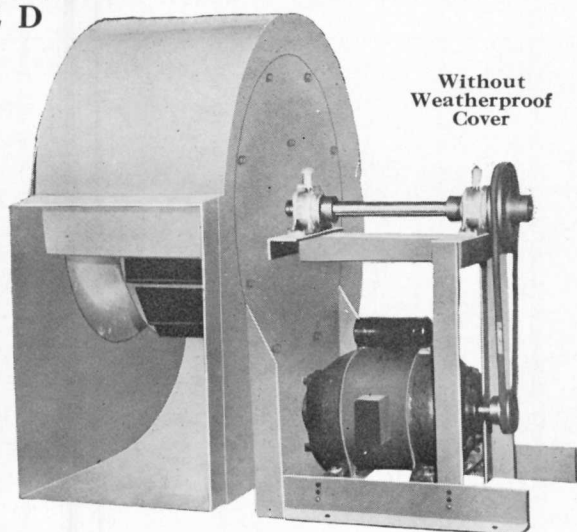
| TYPE BC FAN WHEELS | | | | TYPE S FAN WHEELS | | | |
|--------------------|----------------|----------------|----------------|-------------------|----------------|----------------|-----------|
| Diam. Wheel | Back Plate Ga. | Rim Ga. | Blade Ga. | Diam. Wheel | Back Plate Ga. | Rim Ga. | Blade Ga. |
| 12 | 12 | 14 | 16 | 12 | 12 | 12 | 16 |
| 15 | 12 | 14 | 14 | 15 | 12 | 12 | 16 |
| 18 | 12 | 14 | 14 | 18 | 12 | 12 | 16 |
| 21 | 12 | 14 | 14 | 21 | 10 | 10 | 16 |
| 24 | 10 | 12 | 12 | 24 | 10 | 10 | 16 |
| 27 | 10 | 12 | 12 | 27 | 10 | 10 | 16 |
| 30 | $\frac{3}{16}$ | 10 | 12 | 30 | 10 | 10 | 14 |
| 33 | $\frac{3}{16}$ | 10 | 12 | 33 | $\frac{3}{16}$ | $\frac{3}{16}$ | 14 |
| 36 | $\frac{3}{16}$ | 10 | 12 | 36 | $\frac{3}{16}$ | $\frac{3}{16}$ | 12 |
| 39 | $\frac{3}{16}$ | 10 | 12 | 39 | $\frac{3}{16}$ | $\frac{3}{16}$ | 12 |
| 42 | $\frac{1}{4}$ | $\frac{3}{16}$ | $\frac{3}{16}$ | 42 | $\frac{1}{4}$ | $\frac{1}{4}$ | 12 |
| 48 | $\frac{1}{4}$ | $\frac{3}{16}$ | $\frac{3}{16}$ | 48 | $\frac{1}{4}$ | $\frac{1}{4}$ | 10 |
| 54 | $\frac{1}{4}$ | $\frac{3}{16}$ | $\frac{3}{16}$ | 54 | $\frac{1}{4}$ | $\frac{1}{4}$ | 10 |
| 60 | $\frac{1}{4}$ | $\frac{3}{16}$ | $\frac{3}{16}$ | 60 | $\frac{1}{4}$ | $\frac{1}{4}$ | 10 |



CHAMPION COMPACT NON-OVERLOADING VENT SET. TYPE D



Weatherproof Cover



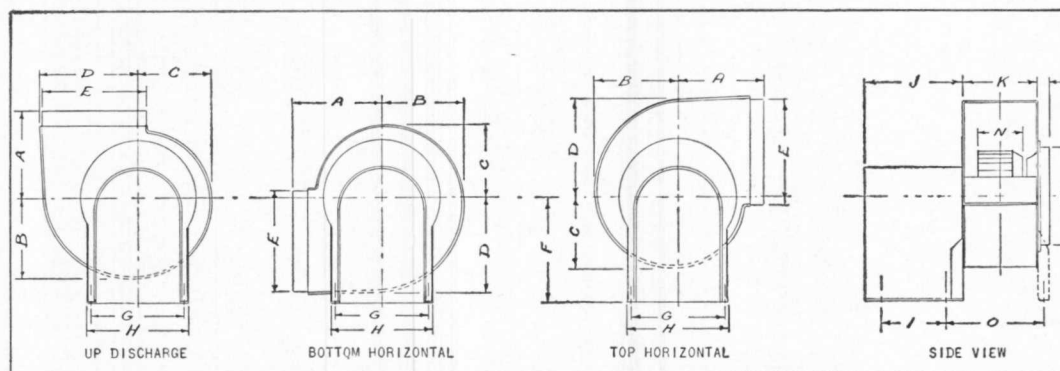
Without
Weatherproof
Cover

FEATURES

PACKAGE UNIT. Comes ready to run by bolting to foundation and connecting to duct work.
NON-OVERLOADING. Will operate over the complete range of capacities specified on table without overloading the Motor.
WEATHER-PROOF. Furnished with weather-proof cover over the bearing drive and Motor and can be furnished with automatic louvres at discharge so that unit can be mounted on roof without building a pent house.
BEARINGS. Bronze Graphite type will give long life with infrequent oiling—large oil reservoirs provided.
ADJUSTABLE DISCHARGE. Can be changed to any angle of discharge desired by removing several bolts.
ADJUSTABLE PULLEYS. For varying speed range as shown under each horsepower rating on capacity table. Standard non adjustable pulleys also furnished for any individual speed shown on capacity tables.
QUIET IN OPERATION. Fans designed for low velocities and quiet operation through use of capacity ranges shown on performance table.
 Fan for use in all types of ventilating conditions—Wheels will not clog with grease in kitchen use and require only infrequent cleaning. Non overloading characteristics eliminate the use of dampers or shields to adjust the system to prevent overloading of the Motor and therefore can be selected to cover a wide range of performance where static pressures are uncertain.

| Size | H.P. | Speed Range | Approx. Complete Weight | Size | H.P. | Speed Range | Approx. Complete Weight |
|---------|-------|-------------|-------------------------|---------|-------|-------------|-------------------------|
| 1 3/4 D | 1/4 | 1750-2433 | 135 | 4 D | 1 1/2 | 566-660 | 550 |
| 2 D | 1/4 | 1150-1350 | 175 | 4 D | 1 | 675-804 | 570 |
| 2 D | 3/4 | 1400-1600 | 175 | 4 D | 1 1/2 | 825-900 | 600 |
| 2 1/2 D | 3/4 | 928-1134 | 190 | 4 1/2 D | 3/4 | 516-605 | 760 |
| 2 1/2 D | 1 1/2 | 1210-1425 | 220 | 4 1/2 D | 1 | 631-700 | 780 |
| 3 D | 1 1/2 | 809-997 | 360 | 4 1/2 D | 1 1/2 | 720-785 | 800 |
| 3 D | 3/4 | 1049-1170 | 380 | 5 D | 1 | 464-568 | 950 |
| 3 1/2 D | 1 1/2 | 672-775 | 485 | 5 D | 1 1/2 | 585-659 | 975 |
| 3 1/2 D | 1 | 827-950 | 500 | 5 D | 2 | 670-711 | 1010 |

*Tables referred to are on next page.



| FAN SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | WHEEL DIA. |
|----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----------|--------|--------|--------|--------|----------|------------|
| 1 3/4 | 10 1/4 | 10 1/4 | 9 1/8 | 11 1/2 | 9 7/8 | 12 | 10 3/8 | 13 1/8 | 8 5/8 | 14 3/4 | 8 1/8 | 1 1/2 | 11 | 4 1/2 | | 10 1/8 |
| 2 | 11 1/4 | 12 1/2 | 10 1/8 | 13 1/4 | 13 | 15 1/2 | 13 1/4 | 16 | 9 | 15 1/8 | 9 7/8 | 1 1/2 | 13 3/4 | 5 | | 12 3/4 |
| 2 1/2 | 13 1/4 | 15 1/4 | 12 5/8 | 16 1/4 | 15 7/8 | 19 | 17 | 19 3/4 | 10 1/2 | 16 5/8 | 12 | 2 | 16 | 6 | | 15 |
| 3 | 15 1/8 | 18 1/2 | 15 3/8 | 19 1/8 | 19 1/4 | 20 3/4 | 19 3/4 | 22 5/8 | 11 1/4 | 17 7/8 | 14 5/8 | 2 1/16 | 19 | 7 | 19 7/16 | 19 |
| 3 1/2 | 18 7/8 | 22 1/2 | 18 5/8 | 23 7/8 | 23 5/8 | 25 1/2 | 24 1/2 | 27 3/8 | 13 | 19 3/16 | 17 3/4 | 2 1/16 | 23 | 8 1/2 | 21 15/16 | 22 1/2 |
| 4 | 20 1/8 | 24 3/4 | 20 1/8 | 26 1/4 | 26 | 28 | 27 | 30 3/8 | 14 | 20 5/16 | 19 5/8 | 3 3/16 | 25 3/4 | 10 | 24 1/8 | 24 1/2 |
| 4 1/2 | 22 1/4 | 27 | 24 1/4 | 28 3/4 | 28 1/2 | 30 1/8 | 30 | 33 3/8 | 15 | 20 5/16 | 21 3/4 | 3 3/16 | 28 | 11 1/2 | 27 7/16 | 27 |
| 5 | 24 7/8 | 30 | 25 | 32 | 31 3/4 | 34 1/4 | 33 | 36 3/8 | 15 | 22 11/16 | 23 3/4 | 3 3/16 | 31 1/2 | 13 | 29 15/16 | 30 |



CAPACITY TABLES—CHAMPION TYPE D VENT SET

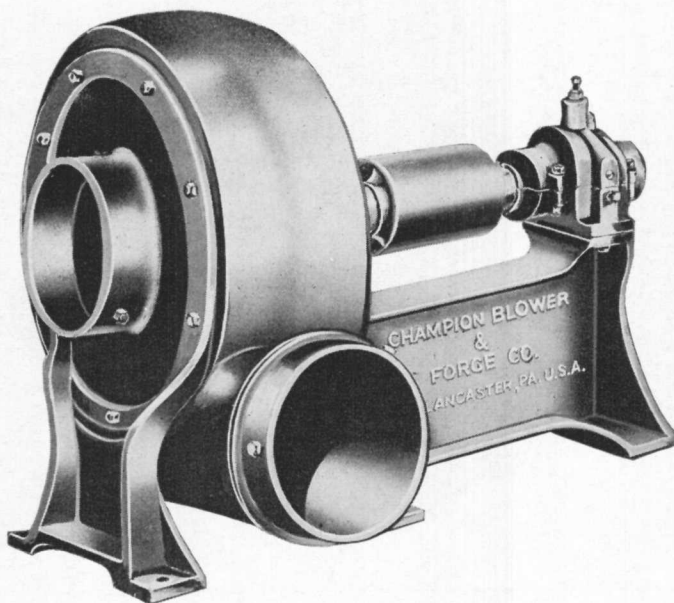
| Size | H.P. | R.P.M. | ¼" S.P. | | ⅜" S.P. | | ½" S.P. | | ⅝" S.P. | | ¾" S.P. | | 1" S.P. | | 1¼" S.P. | | 1½" S.P. | |
|------|------|--------|---------|------|---------|------|---------|------|---------|------|---------|------|---------|------|----------|------|----------|------|
| | | | C.F.M. | O.V. | C.F.M. | O.V. | C.F.M. | O.V. | C.F.M. | O.V. | C.F.M. | O.V. | C.F.M. | O.V. | C.F.M. | O.V. | C.F.M. | O.V. |
| 1¾ | ¼ | 1750 | 745 | 1100 | | | | | | | | | | | | | | |
| | | 1940 | 870 | 1300 | 580 | 900 | | | | | | | | | | | | |
| | | 2067 | 980 | 1500 | 750 | 1110 | 490 | 800 | | | | | | | | | | |
| | | 2208 | 1100 | 1700 | 890 | 1350 | 680 | 1000 | | | | | | | | | | |
| | | 2433 | 1260 | 1967 | 1100 | 1700 | 920 | 1400 | 580 | 900 | | | | | | | | |
| 2 | ¼ | 1150 | 1112 | 1310 | 1051 | 1239 | 990 | 1139 | 840 | 1000 | 650 | 780 | | | | | | |
| | | 1225 | 1205 | 1422 | 1160 | 1379 | 1089 | 1289 | 971 | 1150 | 840 | 1000 | | | | | | |
| | | 1300 | 1295 | 1530 | 1262 | 1481 | 1171 | 1391 | 1098 | 1300 | 1005 | 1190 | 700 | 820 | | | | |
| | | 1350 | 1366 | 1595 | 1295 | 1530 | 1267 | 1485 | 1169 | 1389 | 1076 | 1285 | 835 | 992 | | | | |
| | | | | | | | | | | | | | | | | | | |
| 2 | ¼ | 1400 | 1410 | 1660 | 1356 | 1600 | 1222 | 1533 | 1251 | 1476 | 1168 | 1390 | 931 | 1110 | | | | |
| | | 1475 | 1492 | 1745 | 1442 | 1700 | 1432 | 1667 | 1359 | 1590 | 1270 | 1500 | 1088 | 1300 | 840 | 1000 | | |
| | | 1525 | 1546 | 1820 | 1510 | 1776 | 1476 | 1726 | 1425 | 1660 | 1350 | 1587 | 1184 | 1400 | 971 | 1150 | | |
| | | 1600 | 1630 | 1915 | 1602 | 1859 | 1562 | 1830 | 1496 | 1769 | 1445 | 1710 | 1320 | 1550 | 1130 | 1325 | 860 | 1020 |
| | | | | | | | | | | | | | | | | | | |
| 2½ | ⅜ | 928 | 1660 | 1295 | 1530 | 1210 | 1388 | 1100 | 1221 | 950 | 976 | 850 | | | | | | |
| | | 1000 | 1808 | 1420 | 1742 | 1376 | 1638 | 1290 | 1501 | 1187 | 1269 | 1010 | | | | | | |
| | | 1084 | 2000 | 1575 | 1900 | 1300 | 1814 | 1422 | 1662 | 1326 | 1523 | 1218 | 1132 | 900 | | | | |
| | | 1134 | 2101 | 1662 | 2020 | 1586 | 1930 | 1526 | 1797 | 1446 | 1780 | 1423 | 1388 | 1100 | | | | |
| | | | | | | | | | | | | | | | | | | |
| 2½ | ½ | 1210 | 2270 | 1765 | 2160 | 1706 | 2135 | 1682 | 2036 | 1595 | 1920 | 1520 | 1654 | 1310 | 1260 | 1000 | | |
| | | 1290 | 2408 | 1896 | 2389 | 1871 | 2284 | 1800 | 2256 | 1759 | 2170 | 1710 | 1918 | 1529 | 1244 | 1300 | | |
| | | 1360 | 2540 | 2000 | 2528 | 1980 | 2431 | 1921 | 2402 | 1888 | 2297 | 1819 | 2140 | 1687 | 1900 | 1500 | 1560 | 1235 |
| | | 1425 | 2668 | 2100 | 2601 | 2073 | 2565 | 2033 | 2555 | 1990 | 2436 | 1937 | 2310 | 1827 | 2105 | 1660 | 1746 | 1482 |
| | | | | | | | | | | | | | | | | | | |
| 3 | ½ | 809 | 2635 | 1395 | 2266 | 1310 | 2269 | 1215 | 2070 | 1100 | 1820 | 961 | | | | | | |
| | | 860 | 2830 | 1500 | 2665 | 1427 | 2595 | 1350 | 2255 | 1258 | 2165 | 1158 | | | | | | |
| | | 935 | 3085 | 1651 | 3025 | 1608 | 2842 | 1518 | 2740 | 1451 | 2590 | 1348 | 2070 | 1100 | | | | |
| | | 997 | 3365 | 1782 | 3215 | 1710 | 3115 | 1652 | 3020 | 1600 | 2846 | 1521 | 2458 | 1310 | | | | |
| | | | | | | | | | | | | | | | | | | |
| 3 | ¾ | 1049 | 3501 | 1881 | 3407 | 1818 | 3311 | 1781 | 3215 | 1710 | 3030 | 1625 | 2819 | 1492 | 2355 | 1250 | | |
| | | 1085 | 3677 | 1935 | 3585 | 1897 | 3500 | 1833 | 3896 | 1793 | 3220 | 1731 | 3015 | 1597 | 2622 | 1392 | | |
| | | 1131 | 3800 | 2010 | 3761 | 1979 | 3691 | 1940 | 3592 | 1906 | 3510 | 1840 | 3215 | 1710 | 2848 | 1525 | 2450 | 1300 |
| | | 1170 | 3970 | 2100 | 3958 | 2082 | 3787 | 2017 | 3769 | 1987 | 3695 | 1937 | 3610 | 1900 | 3181 | 1680 | 2819 | 1492 |
| | | | | | | | | | | | | | | | | | | |
| 3½ | ½ | 672 | 3948 | 1408 | 3809 | 1352 | 3550 | 1265 | 3102 | 1115 | 2810 | 1000 | | | | | | |
| | | 706 | 4225 | 1500 | 4042 | 1428 | 3802 | 1351 | 3430 | 1260 | 3097 | 1112 | | | | | | |
| | | 743 | 4502 | 1596 | 4305 | 1522 | 4122 | 1459 | 3922 | 1391 | 3647 | 1286 | 2803 | 995 | | | | |
| | | 775 | 4773 | 1687 | 4510 | 1612 | 4370 | 1553 | 4201 | 1486 | 3920 | 1390 | 3253 | 1147 | | | | |
| | | | | | | | | | | | | | | | | | | |
| 3½ | 1 | 827 | 5067 | 1793 | 4865 | 1730 | 4785 | 1691 | 4516 | 1615 | 4370 | 1553 | 3821 | 1360 | 3093 | 1100 | | |
| | | 868 | 5351 | 1887 | 5175 | 1833 | 5040 | 1786 | 4926 | 1739 | 4701 | 1667 | 4232 | 1510 | 3659 | 1300 | | |
| | | 900 | 5630 | 1981 | 5426 | 1915 | 5242 | 1885 | 5133 | 1818 | 4990 | 1776 | 4525 | 1619 | 4042 | 1428 | 3301 | 1187 |
| | | 950 | 5912 | 2078 | 5833 | 2076 | 5640 | 2000 | 5466 | 1945 | 5357 | 1900 | 5061 | 1793 | 4531 | 1620 | 3942 | 1400 |
| | | | | | | | | | | | | | | | | | | |
| 4 | ½ | 566 | 4138 | 1208 | 4132 | 1200 | 3786 | 1100 | 3724 | 920 | | | | | | | | |
| | | 598 | 4707 | 1380 | 4478 | 1300 | 4132 | 1200 | 3786 | 1100 | 3110 | 910 | | | | | | |
| | | 628 | 4994 | 1476 | 4324 | 1400 | 4488 | 1310 | 4142 | 1205 | 3791 | 1090 | | | | | | |
| | | 660 | 5340 | 1548 | 5142 | 1485 | 4836 | 1412 | 4518 | 1328 | 4150 | 1216 | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| 4 | 1 | 675 | 5501 | 1595 | 5238 | 1530 | 5159 | 1490 | 4819 | 1397 | 4439 | 1292 | 3440 | 1000 | | | | |
| | | 713 | 5848 | 1691 | 5536 | 1610 | 5501 | 1595 | 5178 | 1505 | 4849 | 1418 | 4132 | 1200 | | | | |
| | | 765 | 6235 | 1829 | 6032 | 1767 | 5889 | 1720 | 5686 | 1651 | 5516 | 1600 | 4849 | 1418 | 3910 | 1136 | | |
| | | 804 | 6581 | 1918 | 6530 | 1890 | 6132 | 1819 | 6187 | 1790 | 5870 | 1715 | 5247 | 1532 | 4648 | 1358 | | |
| | | | | | | | | | | | | | | | | | | |
| 4 | 1½ | 825 | 6870 | 1988 | 6744 | 1950 | 6549 | 1897 | 6379 | 1852 | 6187 | 1790 | 5686 | 1651 | 5049 | 1466 | 4132 | 1200 |
| | | 850 | 7072 | 2049 | 6900 | 2000 | 6769 | 1962 | 6584 | 1919 | 6403 | 1870 | 5982 | 1733 | 5481 | 1589 | 4618 | 1348 |
| | | 875 | 7246 | 2100 | 7201 | 2088 | 6941 | 2030 | 6901 | 1992 | 6744 | 1950 | 6192 | 1819 | 5842 | 1690 | 5159 | 1490 |
| | | 900 | 7571 | 2189 | 7323 | 2125 | 7246 | 2100 | 7078 | 2048 | 6901 | 2010 | 6554 | 1900 | 6151 | 1780 | 5488 | 1592 |
| | | | | | | | | | | | | | | | | | | |
| 4½ | ¾ | 516 | 5466 | 1300 | 5066 | 1212 | 4622 | 1100 | | | | | | | | | | |
| | | 546 | 5876 | 1391 | 5486 | 1315 | 5098 | 1225 | 4622 | 1100 | | | | | | | | |
| | | 572 | 6105 | 1463 | 5888 | 1400 | 5539 | 1330 | 5097 | 1216 | 4633 | 1105 | | | | | | |
| | | 605 | 6535 | 1558 | 6318 | 1505 | 5979 | 1428 | 5555 | 1334 | 5097 | 1216 | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| 4½ | 1 | 631 | 6942 | 1647 | 6722 | 1596 | 6386 | 1516 | 6105 | 1463 | 5587 | 1340 | 4622 | 1100 | | | | |
| | | 650 | 7154 | 1700 | 6918 | 1642 | 6722 | 1595 | 6397 | 1518 | 6008 | 1438 | 5044 | 1200 | | | | |
| | | 675 | 7469 | 1771 | 7199 | 1716 | 7019 | 1673 | 6732 | 1600 | 6465 | 1528 | 5495 | 1318 | 4200 | 1060 | | |
| | | 700 | 7750 | 1838 | 7568 | 1796 | 7374 | 1750 | 7143 | 1696 | 6770 | 1616 | 6028 | 1442 | 5044 | 1200 | | |
| | | | | | | | | | | | | | | | | | | |
| ½ | 1½ | 720 | 7998 | 1990 | 7799 | 1847 | 7599 | 1810 | 7453 | 1767 | 7154 | 1700 | 6421 | 1520 | 5467 | 1310 | 4200 | 1000 |
| | | 742 | 8337 | 1988 | 8018 | 1911 | 7920 | 1886 | 7670 | 1820 | 7471 | 1769 | 6770 | 1616 | 5960 | 1416 | 4787 | 1146 |
| | | 765 | 8510 | 2019 | 8219 | 1965 | 8125 | 1943 | 7998 | 1900 | 7818 | 1850 | 7154 | 1700 | 6421 | 1520 | 5486 | 1300 |
| | | 785 | 8801 | 2090 | 8519 | 2020 | 8420 | 2000 | 8247 | 1977 | 8025 | 1912 | 7518 | 1789 | 6770 | 1616 | 5986 | 1420 |
| | | | | | | | | | | | | | | | | | | |
| 5 | 1 | 464 | 6675 | 1300 | 6160 | 1200 | 5641 | 1098 | | | | | | | | | | |
| | | 505 | 7182 | 1392 | 7090 | 1369 | 6642 | 1286 | 6109 | 1190 | | | | | | | | |
| | | 533 | 7720 | 1515 | 7601 | 1472 | 7190 | 1400 | 6675 | 1300 | 6160 | 1200 | | | | | | |
| | | 568 | 8255 | 1638 | 8122 | 1586 | 7712 | 1513 | 7446 | 1455 | 6945 | 1350 | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| 5 | 1½ | 585 | 8735 | 1700 | 8191 | 1628 | 8143 | 1594 | 7712 | 1513 | 7360 | 1433 | 6160 | 1200 | | | | |
| | | 605 | 8891 | 1752 | 8735 | 1700 | 8279 | 1648 | 8220 | 1600 | 7712 | 1513 | 6686 | 1306 | | | | |
| | | 637 | 9518 | 1850 | 9267 | 1816 | 8992 | 1762 | 8767 | 1716 | 8166 | 1621 | 7446 | 1455 | 6205 | 1220 | | |
| | | 659 | 9782 | 1921 | 9641 | 1889 | 9567 | 1857 | 9228 | 1792 | 8799 | 1720 | 8143 | 1594 | 7182 | 1392 | | |
| | | | | | | | | | | | | | | | | | | |
| 5 | 2 | 670 | 10061 | 1967 | 9809 | 1926 | 9646 | 1890 | 9567 | 1857 | 9230 | 1787 | 8166 | 1621 | 7631 | 1486 | 6067 | 1170 |
| | | 687 | 10292 | 2009 | 10133 | 1988 | 9820 | 1931 | 9646 | 1890 | 9279 | 1821 | 8735 | 1700 | 7729 | 1518 | 6669 | 1296 |
| | | 693 | 10510 | 2038 | 10284 | 2005 | 10133 | 1988 | 9706 | 1910 | 9646 | 1890 | 8891 | 1752 | 8160 | 1597 | 6697 | 1320 |
| | | 711 | 10791 | 2100 | 10571 | 2048 | 10284 | 2005 | 10107 | 1977 | 9690 | 1900 | 9250 | 1860 | 8471 | 1650 | 7429 | 1451 |
| | | | | | | | | | | | | | | | | | | |



Champion Ball Bearing Universal Fans

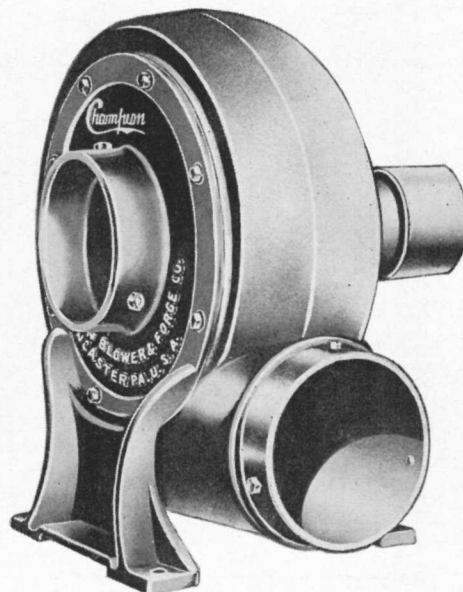
Type A

Arrangement No. 1



Type B

Arrangement No. 2



Champion Ball-Bearing Universal Fans are all-purpose and Double Duty Fans that can be used as an Exhaust Fan or a Volume Blower. They have Heavy-Duty Dust-Proof Double-Row Self-Aligning Ball-Bearings. The Housing is one-piece and can be swung around to give eight different discharge directions to the outlet and, if desired, pulley placed on the opposite side.

Blast Wheels, readily accessible without taking the Fan apart, are made of malleable iron, with six heavy steel plates riveted to the arms and shrouded with side plates to withstand heavy strains, but can be furnished without side plates to handle heavy materials as in Type A Blast Wheel, if so ordered.

These Fans are built strong, sturdy and are dependable; and so compact they require very little space for installation. They can be used equally as well for producing blast as for exhaust purposes.

These Fans meet every condition required of a blower for forced draft purposes where large volume of air is required rather than great pressure—on steam boilers, furnaces, dry rooms, refrigeration, forges, drying various materials, furnishing air for underground passages where workmen are subject to heat and foul air, such as sewers, laying underground wires or cables; blowing gas ovens, etc.—and they are equally as efficient for exhausting purposes where foul air, smoke, gases, heat, etc., are to be removed in mines, steamers, underground apartments, theatres, public halls; vapor and steam from paper machines; for handling dust and dirt from emery and buffing wheels; removing dust and burrs in cotton gins; sawdust and refuse from saw and mill machinery; removing dust and smoke from forge fires.

TYPE A

TYPE B

| No. of Fan | Weight Pounds | Height in Inches | Diameter of Blast Wheel | Outside Diameter of Inlet | Outside Diameter of Outlet | Diameter of Pulley | Face of Pulley | No. of Fan | Weight Pounds | Height in Inches | Diameter of Blast Wheel | Outside Diameter of Inlet | Outside Diameter of Outlet | Diameter of Pulley | Face of Pulley |
|------------|---------------|------------------|-------------------------|---------------------------|----------------------------|--------------------|----------------|------------|---------------|------------------|-------------------------|---------------------------|----------------------------|--------------------|----------------|
| 1/2-A | 40 | 12 1/4 | 8 | 4 | 4 | 2 1/4 | 2 1/2 | 1/2-B | 35 | 12 1/4 | 8 | 4 | 4 | 2 1/4 | 1 1/2 |
| 1-A | 115 | 14 1/4 | 9 1/2 | 5 | 5 | 3 1/4 | 4 1/4 | 1-B | 75 | 14 1/4 | 9 3/8 | 5 | 5 | 3 1/4 | 2 1/2 |
| 2-A | 160 | 16 1/2 | 11 | 6 | 6 | 4 | 4 1/4 | 2-B | 120 | 16 1/2 | 11 | 6 | 6 | 4 | 3 1/2 |
| 3-A | 220 | 20 1/4 | 13 | 7 | 7 | 4 | 5 1/4 | 3-B | 160 | 20 1/4 | 13 | 7 | 7 | 4 | 3 |
| 4-A | 280 | 24 1/2 | 14 1/2 | 8 | 8 | 5 1/4 | 5 1/4 | 4-B | 235 | 24 1/2 | 14 1/2 | 8 | 8 | 5 3/4 | 3 3/8 |
| 5-A | 400 | 27 1/2 | 16 1/4 | 9 | 9 | 5 3/4 | 6 1/4 | 5-B | 350 | 27 1/2 | 16 1/2 | 9 | 9 | 5 3/4 | 3 3/8 |
| 6-A | 440 | 31 | 19 1/2 | 10 | 10 | 5 3/4 | 6 1/4 | 6-B | 370 | 31 | 19 1/2 | 10 | 10 | 5 3/4 | 3 3/8 |
| 7-A | 580 | 37 | 23 | 12 | 12 | 7 1/2 | 8 | 7-B | 580 | 37 | 23 | 12 | 12 | 7 1/2 | 6 1/2 |
| 8-A | 960 | 48 | 28 | 16 | 16 | 7 1/2 | 8 | 8-B | 1000 | 48 | 28 | 16 | 16 | 7 1/2 | 6 1/2 |

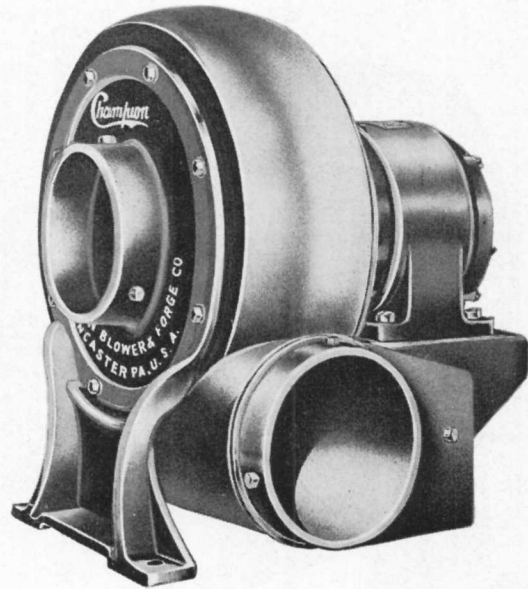
Supplied less pulley.



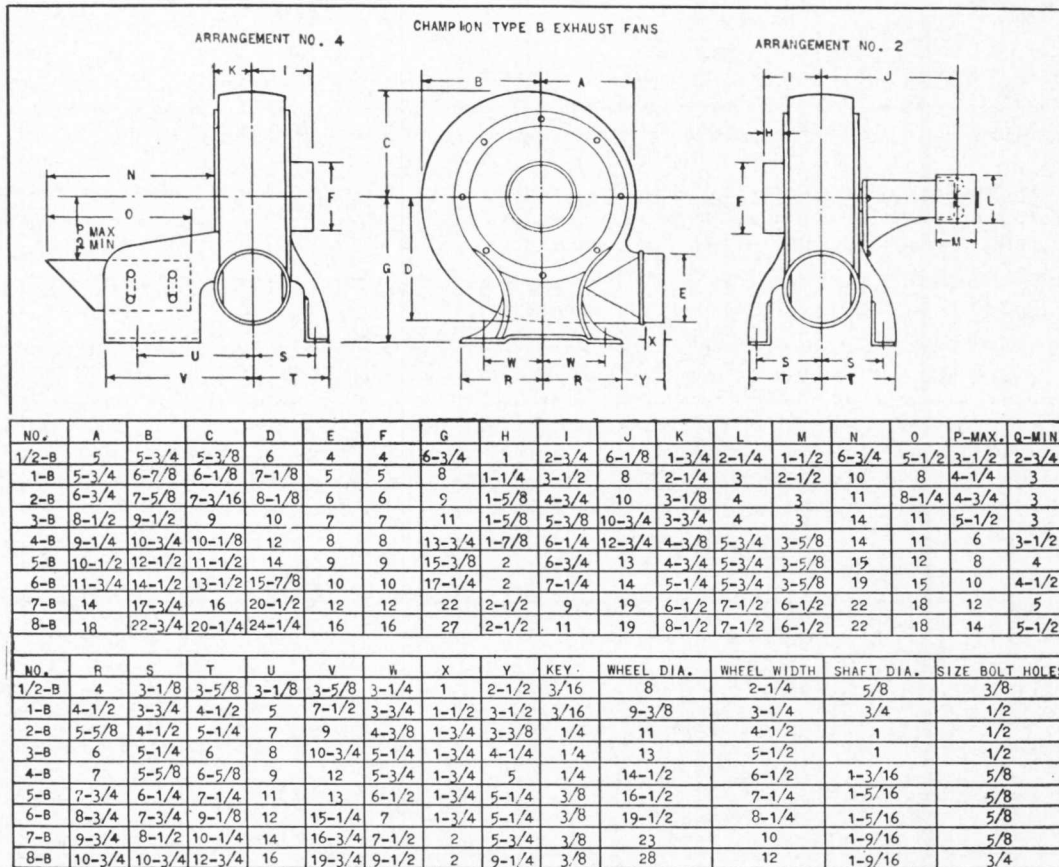
Champion Universal Electric-Driven Fans Type BE

These Fans can be used as an Exhaust Fan or a Volume Blower, with its housing and blast wheel similar to Type B Fan; with a motor bed plate so arranged it is adjustable to take the proper center distances of various style motors.

They can be furnished complete with motor, or less motor, ready to attach any make of motor, if so desired.



| No. of Fan | R.P.M. | H.P. | Weight |
|------------|--------|-------|--------|
| 1/2 BE | 1,725 | 1/6 | 55 |
| 1/2 BE | 3,450 | 1/4 | 75 |
| 1 BE | 1,725 | 1/4 | 85 |
| 1 BE | 3,450 | 1/2 | 95 |
| 2 BE | 1,725 | 1/2 | 140 |
| 2 BE | 3,450 | 2 | 220 |
| 3 BE | 1,140 | 1/2 | 225 |
| 3 BE | 1,725 | 1/2 | 200 |
| 3 BE | 3,450 | 5 | 310 |
| 4 BE | 1,140 | 1/2 | 275 |
| 4 BE | 1,725 | 1 | 295 |
| 4 BE | 3,450 | 7 1/2 | 375 |
| 5 BE | 860 | 1 1/2 | 385 |
| 5 BE | 1,140 | 3/4 | 385 |
| 5 BE | 1,725 | 2 | 440 |
| 6 BE | 860 | 3/4 | 535 |
| 6 BE | 1,140 | 1 | 450 |
| 6 BE | 1,725 | 5 | 525 |
| 7 BE | 860 | 2 | 725 |
| 7 BE | 1,140 | 5 | 725 |
| 7 BE | 1,725 | 10 | 885 |
| 8 BE | 860 | 5 | 1400 |
| 8 BE | 1,140 | 7 1/2 | 1400 |



| CAPACITY TABLES | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------|------------------|----------|-----|----------|-----|----------|-----|----------|-----|----------|-----|--|-----|----------|-----|----------|----|----------|----|-----------|----|------------------------|----|--|
| NO. 1/2 UNIVERSAL FAN | | | | | | | | | | | | CHAMPION TYPE B UNIVERSAL EXHAUST FANS | | | | | | | | | | 4" DIA. INLET & OUTLET | | |
| RPM | TIP SPEED FPM | 1" S. P. | | 2" S. P. | | 3" S. P. | | 4" S. P. | | 5" S. P. | | 6" S. P. | | 7" S. P. | | 8" S. P. | | 9" S. P. | | 10" S. P. | | 11" S. P. | | |
| | | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP | |
| 2890 | 6430 | 200 | .20 | 210 | .10 | 110 | .06 | | | | | | | | | | | | | | | | | |
| 3120 | 6944 | 315 | .27 | 256 | .15 | 162 | .09 | | | | | | | | | | | | | | | | | |
| 3410 | 7587 | 345 | .36 | 295 | .21 | 220 | .14 | 141 | .05 | | | | | | | | | | | | | | | |
| 3634 | 8176 | 380 | .42 | 336 | .30 | 280 | .20 | 212 | .03 | 132 | .07 | | | | | | | | | | | | | |
| 4050 | 9112 | 408 | .51 | 362 | .42 | 312 | .29 | 245 | .18 | 192 | .12 | 125 | .09 | | | | | | | | | | | |
| 4291 | 9547 | 432 | .67 | 387 | .53 | 348 | .40 | 275 | .27 | 223 | .17 | 172 | .11 | | | | | | | | | | | |
| 4500 | 10012 | 455 | .82 | 425 | .66 | 381 | .51 | 326 | .38 | 270 | .26 | 218 | .15 | 151 | .10 | | | | | | | | | |
| 4780 | 10635 | 490 | .95 | 486 | .78 | 418 | .64 | 370 | .48 | 317 | .36 | 262 | .23 | 192 | .13 | | | | | | | | | |

| NO. 1 UNIVERSAL FAN | | | | | | | | | | | | 5" DIA. INLET & OUTLET | | | | | | | | | | | | |
|---------------------|------------------|----------|------|----------|------|----------|------|----------|------|----------|------|------------------------|------|----------|------|----------|-----|----------|-----|-----------|----|-----------|----|--|
| RPM | TIP SPEED FPM | 1" S. P. | | 2" S. P. | | 3" S. P. | | 4" S. P. | | 5" S. P. | | 6" S. P. | | 7" S. P. | | 8" S. P. | | 9" S. P. | | 10" S. P. | | 11" S. P. | | |
| | | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP | |
| 2373 | 5500 | 382 | .2 | 220 | .12 | | | | | | | | | | | | | | | | | | | |
| 2575 | 6000 | 441 | .26 | 309 | .21 | | | | | | | | | | | | | | | | | | | |
| 2787 | 6500 | 505 | .34 | 382 | .29 | 276 | .2 | | | | | | | | | | | | | | | | | |
| 3004 | 7000 | 558 | .42 | 450 | .39 | 308 | .23 | | | | | | | | | | | | | | | | | |
| 3216 | 7500 | 612 | .54 | 514 | .50 | 401 | .43 | 255 | .3 | | | | | | | | | | | | | | | |
| 3434 | 8000 | 661 | .66 | 553 | .61 | 475 | .56 | 380 | .4 | 276 | .41 | | | | | | | | | | | | | |
| 3636 | 8500 | 715 | .8 | 666 | .76 | 544 | .7 | 441 | .6 | 313 | .47 | 208 | .44 | | | | | | | | | | | |
| 3888 | 9000 | 764 | .98 | 688 | .92 | 607 | .84 | 519 | .77 | 390 | .5 | 301 | .48 | | | | | | | | | | | |
| 4040 | 9500 | 813 | 1.13 | 627 | 1.09 | 671 | 1.03 | 588 | .96 | 490 | .86 | 353 | .57 | 210 | .45 | | | | | | | | | |
| 4292 | 10000 | 867 | 1.32 | | | | | 656 | 1.13 | 568 | 1.08 | 447 | .89 | 256 | .56 | | | | | | | | | |
| 4495 | 10500 | 911 | 1.52 | | | | | 711 | 1.37 | 642 | 1.27 | 536 | 1.01 | 333 | .69 | | | | | | | | | |
| 4722 | 11000 | 960 | 1.76 | | | | | 774 | 1.6 | 710 | 1.52 | 620 | 1.22 | 412 | .88 | 203 | .47 | | | | | | | |
| 4940 | 11500 | 1019 | 2.06 | | | | | | | 774 | 1.76 | 698 | 1.48 | 462 | 1.00 | 321 | .79 | | | | | | | |
| 5160 | 12000 | 1102 | 2.52 | | | | | | | 837 | 2.10 | 760 | 1.70 | 581 | 1.31 | 397 | .96 | 216 | .81 | | | | | |

| NO. 2 UNIVERSAL FAN | | | | | | | | | | | | 6" DIA. INLET & OUTLET | | | | | | | | | | | | |
|---------------------|------------------|----------|------|----------|------|----------|------|----------|------|----------|------|------------------------|------|----------|------|----------|------|----------|------|-----------|------|-----------|----|--|
| RPM | TIP SPEED FPM | 1" S. P. | | 2" S. P. | | 3" S. P. | | 4" S. P. | | 5" S. P. | | 6" S. P. | | 7" S. P. | | 8" S. P. | | 9" S. P. | | 10" S. P. | | 11" S. P. | | |
| | | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP | |
| 1818 | 5000 | 465 | .2 | 210 | .17 | | | | | | | | | | | | | | | | | | | |
| 2000 | 5500 | 558 | .29 | 480 | .21 | | | | | | | | | | | | | | | | | | | |
| 2363 | 6500 | 720 | .49 | 605 | .42 | 470 | .35 | | | | | | | | | | | | | | | | | |
| 2545 | 7000 | 808 | .62 | 747 | .55 | 510 | .44 | | | | | | | | | | | | | | | | | |
| 2727 | 7500 | 872 | .86 | 795 | .7 | 578 | .61 | 540 | .52 | | | | | | | | | | | | | | | |
| 2900 | 8000 | 946 | .99 | 827 | .86 | 691 | .79 | 620 | .68 | 560 | .62 | | | | | | | | | | | | | |
| 3090 | 8500 | 1049 | 1.23 | 917 | 1.30 | 809 | 1.08 | 727 | .87 | 690 | .75 | | | | | | | | | | | | | |
| 3270 | 9000 | 1108 | 1.67 | 1033 | 1.51 | 928 | 1.32 | 835 | 1.18 | 800 | .95 | 580 | .85 | | | | | | | | | | | |
| 4490 | 9500 | 1192 | 1.91 | 1108 | 1.85 | 1060 | 1.67 | 937 | 1.47 | 865 | 1.32 | 695 | 1.15 | 585 | .9 | | | | | | | | | |
| 3636 | 10000 | 1265 | 2.16 | | | | | 991 | 1.62 | 908 | 1.52 | 740 | 1.32 | 660 | 1.08 | | | | | | | | | |
| 3818 | 10500 | 1343 | 2.35 | | | | | 1079 | 1.96 | 953 | 1.81 | 794 | 1.66 | 765 | 1.37 | 752 | 1.18 | | | | | | | |
| 4000 | 11000 | 1392 | 2.65 | | | | | 1162 | 2.25 | 1079 | 2.15 | 897 | 1.96 | 780 | 1.81 | 792 | 1.62 | | | | | | | |
| 4180 | 11000 | 1470 | 2.99 | | | | | | | 1152 | 2.5 | 1000 | 2.4 | 892 | 2.2 | 823 | 1.96 | 756 | 1.71 | | | | | |
| 4230 | 12000 | 1556 | 3.41 | | | | | | | | | 1127 | 2.9 | 1010 | 2.5 | 964 | 2.17 | 812 | 2.01 | 709 | 1.92 | | | |

| NO. 3 UNIVERSAL FAN | | | | | | | | | | | | 7" DIA. INLET & OUTLET | | | | | | | | | | | | |
|---------------------|------------------|----------|------|----------|------|----------|------|----------|------|----------|------|------------------------|------|----------|------|----------|------|----------|------|-----------|-----|-----------|----|--|
| RPM | TIP SPEED FPM | 1" S. P. | | 2" S. P. | | 3" S. P. | | 4" S. P. | | 5" S. P. | | 6" S. P. | | 7" S. P. | | 8" S. P. | | 9" S. P. | | 10" S. P. | | 11" S. P. | | |
| | | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP | |
| 1540 | 5000 | 690 | .37 | 570 | .35 | | | | | | | | | | | | | | | | | | | |
| 1697 | 5500 | 795 | .5 | 677 | .45 | 310 | .4 | | | | | | | | | | | | | | | | | |
| 1860 | 6000 | 864 | .71 | 744 | .65 | 620 | .6 | | | | | | | | | | | | | | | | | |
| 2000 | 6500 | 936 | .77 | 891 | .68 | 780 | .65 | | | | | | | | | | | | | | | | | |
| 2162 | 7000 | 1008 | 1.12 | 983 | 1.01 | 860 | .98 | 645 | .95 | | | | | | | | | | | | | | | |
| 2317 | 7500 | 1150 | 1.45 | 1100 | 1.29 | 985 | 1.15 | 895 | 1.09 | | | | | | | | | | | | | | | |
| 2624 | 8500 | 1324 | 2.1 | 1247 | 1.96 | 1186 | 1.82 | 1060 | 1.75 | 1003 | 1.7 | 950 | 1.6 | | | | | | | | | | | |
| 2774 | 9000 | 1400 | 2.9 | | | | | 1047 | 1.93 | 1005 | 1.8 | 720 | 1.61 | | | | | | | | | | | |
| 2932 | 9500 | 1568 | 3.3 | | | | | 1120 | 2.1 | 1172 | 2.72 | 1084 | 2.4 | 910 | 2.2 | 760 | 2.0 | | | | | | | |
| 3086 | 10000 | 1640 | 3.7 | | | | | | | 1225 | 2.95 | 1124 | 2.65 | 1060 | 2.81 | 990 | 2.6 | | | | | | | |
| 3240 | 10500 | 1712 | 4.1 | | | | | | | | | 1192 | 3.45 | 1140 | 3.1 | 1015 | 2.9 | 733 | 2.7 | | | | | |
| 3395 | 11000 | 1860 | 4.7 | | | | | | | | | 1410 | 3.95 | 1295 | 3.64 | 1150 | 3.5 | 1010 | 3.3 | | | | | |
| 3550 | 11500 | 1950 | 5.2 | | | | | | | | | | | 1495 | 4.02 | 1320 | 4.55 | 1200 | 4.2 | 1090 | 4. | | | |
| 3702 | 12000 | 2001 | 6.4 | | | | | | | | | | | | | 1480 | 4.87 | 1330 | 4.75 | 1205 | 4.6 | | | |

| NO. 4 UNIVERSAL FAN | | | | | | | | | | | | 8" DIA. INLET & OUTLET | | | | | | | | | | | | |
|---------------------|------------------|----------|------|----------|------|----------|------|----------|------|----------|------|------------------------|------|----------|------|----------|------|----------|------|-----------|------|-----------|------|--|
| RPM | TIP SPEED FPM | 1" S. P. | | 2" S. P. | | 3" S. P. | | 4" S. P. | | 5" S. P. | | 6" S. P. | | 7" S. P. | | 8" S. P. | | 9" S. P. | | 10" S. P. | | 11" S. P. | | |
| | | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP | |
| 1390 | 5000 | 860 | .28 | 358 | .14 | | | | | | | | | | | | | | | | | | | |
| 1527 | 5500 | 1017 | .45 | 681 | .32 | | | | | | | | | | | | | | | | | | | |
| 1666 | 6000 | 1174 | .71 | 823 | .57 | 330 | .40 | | | | | | | | | | | | | | | | | |
| 1805 | 6500 | 1213 | .93 | 1000 | .73 | 610 | .56 | 380 | .32 | | | | | | | | | | | | | | | |
| 1944 | 7000 | 1362 | 1.25 | 1240 | .98 | 894 | .78 | 510 | .57 | | | | | | | | | | | | | | | |
| 2083 | 7500 | 1472 | 1.41 | 1390 | 1.26 | 1085 | 1.04 | 777 | .79 | 310 | .40 | | | | | | | | | | | | | |
| 2222 | 8000 | 1614 | 1.74 | 1512 | 1.56 | 1359 | 1.34 | 1003 | 1.23 | 568 | .65 | | | | | | | | | | | | | |
| 2361 | 8500 | 1695 | 2.12 | 1600 | 1.81 | 1510 | 1.61 | 1182 | 1.42 | 876 | 1.17 | 787 | .82 | | | | | | | | | | | |
| 2500 | 9000 | 1777 | 2.4 | | | 1621 | 1.89 | 1355 | 1.7 | 1123 | 1.58 | 930 | 1.36 | 760 | 1.0 | | | | | | | | | |
| 2777 | 10000 | 1970 | 3.54 | | | | | | | 1472 | 2.35 | 1276 | 2.15 | 1097 | 1.81 | 622 | 1.24 | | | | | | | |
| 2916 | 10500 | 2102 | 4. | | | | | | | | | 1455 | 2.81 | 1259 | 2.51 | 1012 | 1.93 | 567 | 1.6 | | | | | |
| 3055 | 11000 | 2195 | 4.5 | | | | | | | | | 1617 | 3.13 | 1447 | 2.84 | 1251 | 2.53 | 975 | 2.0 | | | | | |
| 3194 | 11500 | 2287 | 5.03 | | | | | | | | | | | 1609 | 3.47 | 1447 | 3.06 | 1242 | 2.72 | 890 | 2.17 | | | |
| 3333 | 12000 | 2380 | 5.62 | | | | | | | | | | | 1717 | 4.10 | 1597 | 3.72 | 1376 | 3.36 | 1192 | 2.98 | 878 | 2.43 | |



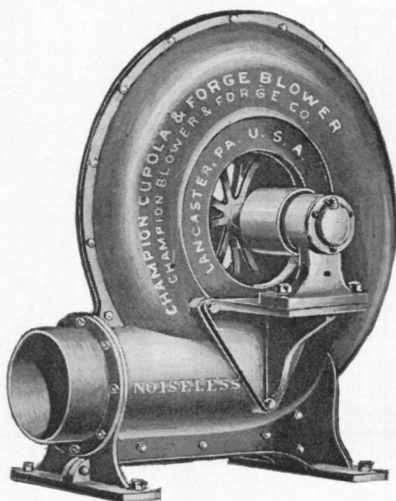
CAPACITY TABLES
CHAMPION TYPE B UNIVERSAL EXHAUST FANS

| CAPACITY TABLES CHAMPION TYPE B UNIVERSAL EXHAUST FANS | | | | | | | | | | | | | | | | | | | | | | | |
|---|---------------|---------|-------|---------|------|---------|------|---------|------|---------|------|-------------------------|------|---------|-------|---------|------|---------|------|----------|------|----------|------|
| NO. 5 UNIVERSAL FAN | | | | | | | | | | | | 9" DIA. INLET & OUTLET | | | | | | | | | | | |
| RPM | TIP SPEED FPM | 1" S.P. | | 2" S.P. | | 3" S.P. | | 4" S.P. | | 5" S.P. | | 6" S.P. | | 7" S.P. | | 8" S.P. | | 9" S.P. | | 10" S.P. | | 11" S.P. | |
| | | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP |
| 1193 | 5000 | 1021 | .66 | 704 | .36 | 317 | .30 | | | | | | | | | | | | | | | | |
| 1312 | 5500 | 1400 | 1.13 | 982 | .67 | 779 | .55 | | | | | | | | | | | | | | | | |
| 1432 | 6000 | 1760 | 1.52 | 1496 | 1.15 | 1134 | .92 | 803 | .73 | | | | | | | | | | | | | | |
| 1551 | 6500 | 2100 | 2.68 | 1880 | 1.75 | 1594 | 1.54 | 1210 | 1.1 | 792 | .62 | | | | | | | | | | | | |
| 1670 | 7000 | 2440 | 3.70 | 2224 | 2.56 | 1844 | 2.2 | 1369 | 1.92 | 1187 | 1.51 | | | | | | | | | | | | |
| 1790 | 7500 | 2680 | 4.65 | 2412 | 3.92 | 2250 | 3.1 | 1895 | 2.92 | 1420 | 2.07 | | | | | | | | | | | | |
| 1910 | 8000 | 2890 | 5.05 | 2597 | 4.32 | 2360 | 3.7 | 2060 | 3.3 | 1597 | 2.77 | 992 | 1.87 | | | | | | | | | | |
| 2028 | 8500 | 2930 | 5.65 | 2714 | 4.78 | 2455 | 4.1 | 2270 | 3.55 | 1958 | 3.25 | 1342 | 2.41 | 878 | 1.88 | | | | | | | | |
| 2148 | 9000 | 3050 | 6.05 | 2891 | 5.21 | 2662 | 4.8 | 2470 | 3.95 | 2200 | 3.6 | 1856 | 3.16 | 1350 | 2.31 | | | | | | | | |
| 2267 | 9500 | 3181 | 6.6 | | | | | 2696 | 4.32 | 2420 | 4.15 | 2150 | 3.85 | 1635 | 3.3 | 1071 | 2.12 | | | | | | |
| 2386 | 10000 | 3300 | 7.15 | | | | | | | 2610 | 4.65 | 2380 | 4.31 | 1900 | 4.0 | 1513 | 3.35 | 682 | 2.33 | | | | |
| 2500 | 10500 | 3420 | 7.7 | | | | | | | 2720 | 5.10 | 2590 | 4.75 | 2160 | 4.6 | 1870 | 4.15 | 1121 | 3.70 | | | | |
| 2625 | 11000 | 3540 | 8.3 | | | | | | | | | 2780 | 5.05 | 2380 | 5.25 | 1950 | 4.85 | 1630 | 4.35 | 820 | 3.72 | | |
| 2744 | 11500 | 3620 | 8.9 | | | | | | | | | | | 2670 | 5.95 | 2280 | 5.6 | 1840 | 5.20 | 1420 | 4.55 | | |
| 2864 | 12000 | 3700 | 9.6 | | | | | | | | | | | 2880 | 6.7 | 2580 | 6.35 | 2180 | 5.95 | 1640 | 5.50 | 1230 | 4.65 |
| NO. 6 UNIVERSAL FAN | | | | | | | | | | | | 10" DIA. INLET & OUTLET | | | | | | | | | | | |
| RPM | TIP SPEED FPM | 1" S.P. | | 2" S.P. | | 3" S.P. | | 4" S.P. | | 5" S.P. | | 6" S.P. | | 7" S.P. | | 8" S.P. | | 9" S.P. | | 10" S.P. | | 11" S.P. | |
| | | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP |
| 1000 | 5000 | 1681 | 2.05 | 1202 | 1.75 | 860 | 1.5 | | | | | | | | | | | | | | | | |
| 1100 | 5500 | 1915 | 2.67 | 1575 | 2.07 | 1120 | 1.8 | 760 | 1.4 | | | | | | | | | | | | | | |
| 1205 | 6000 | 2105 | 2.92 | 1749 | 2.63 | 1313 | 2.29 | 1001 | 2.0 | 658 | 1.38 | | | | | | | | | | | | |
| 1305 | 6500 | 2395 | 3.22 | 1880 | 2.97 | 1590 | 2.76 | 1282 | 2.51 | 971 | 2.2 | 521 | 1.25 | | | | | | | | | | |
| 1404 | 7000 | 2674 | 3.76 | 2166 | 3.42 | 1712 | 3.02 | 1550 | 2.82 | 1202 | 2.5 | 841 | 1.9 | | | | | | | | | | |
| 1505 | 7500 | 2818 | 4.98 | 2527 | 4.5 | 1972 | 4.02 | 1692 | 3.66 | 1500 | 3.32 | 1168 | 2.3 | 807 | 1.8 | | | | | | | | |
| 1605 | 8000 | 2989 | 5.3 | 2781 | 4.98 | 2488 | 4.78 | 1958 | 4.54 | 1605 | 4.07 | 1442 | 3.1 | 1127 | 2.1 | | | | | | | | |
| 1705 | 8500 | 3129 | 5.94 | 2942 | 5.62 | 2700 | 5.52 | 2442 | 4.98 | 1875 | 4.61 | 1598 | 3.73 | 1223 | 2.6 | 1007 | 2.22 | | | | | | |
| 1805 | 9000 | 3222 | 6.61 | 3097 | 6.37 | 2883 | 6.10 | 2690 | 5.51 | 2439 | 5.3 | 1907 | 4.21 | 1631 | 3.5 | 1170 | 2.71 | | | | | | |
| 1910 | 9500 | 3393 | 7.27 | 3231 | 7.11 | 2999 | 6.97 | 2812 | 6.21 | 2581 | 6.04 | 2012 | 5.37 | 1896 | 4.84 | 1552 | 3.42 | 1091 | 2.7 | | | | |
| 2000 | 10000 | 3454 | 7.96 | | | | | | | 2661 | 6.4 | 2267 | 6.08 | 2100 | 5.47 | 1837 | 5.00 | 1439 | 3.4 | | | | |
| 2110 | 10500 | 3606 | 8.84 | | | | | | | | | 2433 | 7.33 | 2338 | 6.32 | 2087 | 5.56 | 1765 | 4.93 | 1286 | 3.32 | | |
| 2210 | 11000 | 3758 | 9.77 | | | | | | | | | 2590 | 7.96 | 2423 | 7.18 | 2234 | 6.65 | 1997 | 5.77 | 1609 | 4.23 | 1020 | 3.27 |
| 2310 | 11500 | 3910 | 10.6 | | | | | | | | | | | 2570 | 8.07 | 2331 | 7.61 | 2138 | 6.18 | 1777 | 5.37 | 1504 | 3.97 |
| 2410 | 12000 | 4072 | 11.48 | | | | | | | | | | | 2636 | 9.04 | 2480 | 8.58 | 2230 | 7.07 | 2022 | 6.3 | 1635 | 4.88 |
| NO. 7 UNIVERSAL FAN | | | | | | | | | | | | 12" DIA. INLET & OUTLET | | | | | | | | | | | |
| RPM | TIP SPEED FPM | 1" S.P. | | 2" S.P. | | 3" S.P. | | 4" S.P. | | 5" S.P. | | 6" S.P. | | 7" S.P. | | 8" S.P. | | 9" S.P. | | 10" S.P. | | 11" S.P. | |
| | | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP |
| 910 | 5000 | 1576 | 1.63 | 793 | 1.37 | | | | | | | | | | | | | | | | | | |
| 1000 | 5500 | 1767 | 2.90 | 1254 | 2.64 | 697 | 2.01 | | | | | | | | | | | | | | | | |
| 1090 | 6000 | 2010 | 4.15 | 1598 | 3.91 | 974 | 2.51 | | | | | | | | | | | | | | | | |
| 1181 | 6500 | 2171 | 4.54 | 1974 | 4.34 | 1486 | 3.06 | 720 | 2.42 | | | | | | | | | | | | | | |
| 1272 | 7000 | 2442 | 4.93 | 2172 | 4.8 | 1830 | 4.45 | 1231 | 3.92 | | | | | | | | | | | | | | |
| 1363 | 7500 | 2704 | 5.49 | 2430 | 5.4 | 2120 | 4.87 | 1798 | 4.54 | 1192 | 3. | | | | | | | | | | | | |
| 1454 | 8000 | 3060 | 6.08 | 2720 | 6.0 | 2408 | 5.5 | 2143 | 5.2 | 1630 | 4.58 | 1087 | 2.2 | | | | | | | | | | |
| 1545 | 8500 | 3276 | 6.74 | 3020 | 6.5 | 2732 | 6.2 | 2415 | 5.67 | 2157 | 5.3 | 1498 | 3.54 | | | | | | | | | | |
| 1636 | 9000 | 3453 | 7.42 | 3262 | 7.1 | 3007 | 6.9 | 2748 | 6.36 | 2488 | 5.98 | 2108 | 4.5 | 1367 | 3.81 | | | | | | | | |
| 1727 | 9500 | 3674 | 8.78 | 3497 | 8.2 | 3298 | 7.6 | 3003 | 7.11 | 2776 | 6.84 | 2423 | 5.26 | 2072 | 4.78 | | | | | | | | |
| 1818 | 10000 | 3880 | 9.15 | | | | | 3290 | 8.0 | 3068 | 7.5 | 2790 | 6.12 | 2460 | 5.65 | 2016 | 4.08 | | | | | | |
| 1910 | 10500 | 4082 | 10.2 | | | | | | | 3281 | 8.4 | 3078 | 7.18 | 2680 | 6.6 | 2435 | 5.08 | 2030 | 4.26 | | | | |
| 2000 | 11000 | 4174 | 11.16 | | | | | | | | | 3256 | 8.28 | 2998 | 7.57 | 2710 | 6.14 | 2445 | 5.6 | 2025 | 4.41 | | |
| 2090 | 11500 | 4376 | 12.46 | | | | | | | | | | | 3240 | 8.82 | 2826 | 7.25 | 2734 | 6.7 | 2354 | 6.19 | 1939 | 4.65 |
| 2182 | 12000 | 4578 | 14.75 | | | | | | | | | | | 3354 | 9.97 | 3224 | 8.5 | 2874 | 8.02 | 2667 | 7.53 | 2202 | 6.66 |
| NO. 8 UNIVERSAL FAN | | | | | | | | | | | | 16" DIA. INLET & OUTLET | | | | | | | | | | | |
| RPM | TIP SPEED FPM | 1" S.P. | | 2" S.P. | | 3" S.P. | | 4" S.P. | | 5" S.P. | | 6" S.P. | | 7" S.P. | | 8" S.P. | | 9" S.P. | | 10" S.P. | | 11" S.P. | |
| | | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP | CFM | HP |
| 765 | 5000 | 2114 | 1.9 | 1084 | 1.52 | | | | | | | | | | | | | | | | | | |
| 839 | 5500 | 2447 | 2.27 | 1723 | 1.91 | | | | | | | | | | | | | | | | | | |
| 915 | 6000 | 2781 | 2.66 | 2179 | 2.34 | 983 | 1.74 | | | | | | | | | | | | | | | | |
| 992 | 6500 | 3092 | 3.16 | 2580 | 2.84 | 1857 | 2.4 | | | | | | | | | | | | | | | | |
| 1070 | 7000 | 3326 | 3.79 | 2838 | 3.42 | 2358 | 3. | 1345 | 2.34 | | | | | | | | | | | | | | |
| 1145 | 7500 | 3693 | 5.41 | 3217 | 4.40 | 2791 | 3.67 | 2147 | 3.16 | | | | | | | | | | | | | | |
| 1225 | 8000 | 4004 | 6.32 | 3593 | 5.21 | 3180 | 4.46 | 2647 | 3.95 | 1890 | 3.23 | | | | | | | | | | | | |
| 1300 | 8500 | 4282 | 7.33 | 3773 | 6.52 | 3387 | 5.37 | 3081 | 4.78 | 2633 | 4.24 | 1390 | 3.12 | | | | | | | | | | |
| 1375 | 9000 | 4593 | 8.24 | 4258 | 7.18 | 3921 | 6.37 | 3427 | 5.73 | 3014 | 5.24 | 2458 | 4.67 | | | | | | | | | | |
| 1445 | 9500 | 4860 | 9.35 | | | | | | | 3425 | 6.3 | 2970 | 5.68 | 2290 | 4.9 | | | | | | | | |
| 1530 | 10000 | 5162 | 10.05 | | | | | | | 3637 | 7.5 | 3425 | 6.9 | 2936 | 5.9 | 2168 | 4.21 | | | | | | |
| 1605 | 10500 | 5539 | 11.2 | | | | | | | | | 3848 | 7.64 | 3360 | 6.8 | 2913 | 5.8 | 2023 | 4.45 | | | | |
| 1675 | 11000 | 5728 | 12.7 | | | | | | | | | 4248 | 8.97 | 3970 | 8.4 | 3445 | 7.35 | 2925 | 6.6 | 1890 | 4.73 | | |
| 1760 | 11500 | 6006 | 14.4 | | | | | | | | | | | 4294 | 9.57 | 3915 | 8.9 | 3505 | 8.12 | 2958 | 6.59 | 1890 | 5.24 |
| 1830 | 12000 | 6307 | 15.92 | | | | | | | | | | | 4682 | 11.15 | 4349 | 10.8 | 3982 | 10. | 3537 | 9.23 | 3003 | 8.12 |



CHAMPION STEEL PRESSURE BLOWERS

For Cupola, Forges and Furnaces

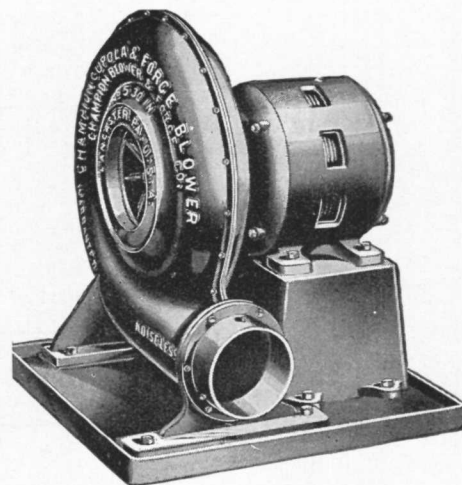


Ball Bearing Belt Drive Blower

The Champion Steel Pressure Blower is especially adapted for Foundry Cupolas, Furnaces, Machine Shops, Forge Fires, Sand Blast Machines, or any work requiring forcing of air long distances, high pressure or strong blast. Will produce a stronger Blast with same amount of power than any other Blower.

We furnish all sizes of *Pressure Blowers with Genuine High-Grade Double Row Self-Aligning Ball Bearings.*

The value of Ball Bearings is so pronounced that it should not be overlooked by the purchaser. With *Double Row Self-Aligning Ball Bearings* less attention is required in oiling, as these *High-Grade Double Row Self-Aligning Bearings* will run for months without any attention. Besides a big saving is made in power. No up-to-date high-grade mechanical machinery is furnished without *Ball Bearings*, and we have put the price of Ball-Bearing Blowers within the reach of every user.



Direct Motor Drive Blower

| No. of Blower | Weight Pounds | Height in Inches | Diameter of Blast Wheel | Diameter of Pulley | Face of Pulley | Outside Diameter of Outlet | Diam. in Ins. Inside Cupola | Melting Capacity per Hour in Lbs. | Speed Melting Iron | Pressure of Blast. Ounces | No. of Forge Fires | Speed Forge Fires |
|---------------|---------------|------------------|-------------------------|--------------------|----------------|----------------------------|-----------------------------|-----------------------------------|--------------------|---------------------------|--------------------|-------------------|
| 1/2 | 30 | 12 | 7 3/8 | 1 7/8 | 1 3/8 | 2 3/4 | .. | ..... | ..... | 2 | 1 | 4,300 |
| 1 | 50 | 15 | 9 | 2 1/2 | 2 | 3 1/2 | .. | ..... | ..... | 3 | 2 | 4,200 |
| 2 | 110 | 20 | 12 5/8 | 3 | 2 1/8 | 4 7/8 | .. | ..... | ..... | 4 | 4 | 4,000 |
| 3 | 160 | 24 | 14 1/2 | 3 3/8 | 2 1/2 | 5 | 22 | 1,300 | 4,150 | 5 | 6 | 3,725 |
| 4 | 225 | 26 | 17 1/4 | 3 7/8 | 2 3/4 | 6 | 26 | 2,000 | 3,790 | 6 | 9 | 3,103 |
| 5 | 330 | 30 | 18 1/2 | 4 1/2 | 3 1/8 | 6 3/4 | 30 | 4,000 | 3,275 | 7 | 15 | 2,456 |
| 6 | 425 | 35 | 22 | 4 7/8 | 3 1/2 | 8 | 35 | 6,000 | 3,050 | 8 | 18 | 2,224 |
| 7 | 660 | 40 | 24 1/2 | 6 | 3 3/4 | 9 1/4 | 40 | 10,000 | 2,900 | 10 | 24 | 1,814 |
| 8 | 800 | 45 | 28 | 7 | 4 1/2 | 11 | 46 | 14,600 | 2,820 | 12 | 30 | 1,619 |
| 9 | 1070 | 53 | 33 | 7 3/4 | 5 1/2 | 12 1/2 | 53 | 22,300 | 2,600 | 14 | 40 | 1,344 |
| 10 | 1850 | 64 | 42 | 9 | 6 1/8 | 14 | 60 | 28,500 | 2,270 | 16 | 52 | 1,200 |

| No. | Speed | Horse Power | Pressure Ounces | Capacity Cubic Feet | Weight Pounds |
|-----|-------|-------------|-----------------|---------------------|---------------|
| 1/2 | 3,450 | 1 1/2 | 2 | 100 | 55 |
| 1 | 3,450 | 1 1/4 | 2 1/4 | 200 | 80 |
| 2 | 3,450 | 1 1/2 | 3 | 500 | 190 |
| 3 | 1,750 | 1 1/2 | 1 1/2 | 200 | 225 |
| 3 | 3,450 | 3 | 4 | 650 | 230 |
| 4 | 1,750 | 2 | 2 | 325 | 295 |
| 4 | 3,450 | 7 1/2 | 5 | 850 | 340 |
| 5 | 1,750 | 3 | 3 | 600 | 470 |
| 5 | 3,450 | 10 | 8 | 1,250 | 490 |
| 6 | 1,150 | 1 | 2 | 450 | 510 |
| 6 | 1,750 | 5 | 3 1/2 | 750 | 530 |
| 6 | 3,450 | 20 | 10 | 1,600 | 610 |
| 7 | 1,150 | 3 | 3 | 850 | 790 |
| 7 | 1,750 | 10 | 4 | 1,400 | 805 |
| 7 | 3,450 | 40 | 12 | 2,700 | 915 |
| 8 | 850 | 5 | 2 | 900 | 1035 |
| 8 | 1,150 | 7 1/2 | 3 | 1,600 | 1035 |
| 8 | 1,750 | 20 | 5 | 2,100 | 1060 |
| 8 | 3,450 | 50 | 14 | 4,200 | 1265 |
| 9 | 850 | 7 1/2 | 2 1/2 | 1,850 | 1325 |
| 9 | 1,150 | 15 | 4 | 2,400 | 1350 |
| 10 | 850 | 15 | 4 | 2,950 | 2215 |
| 10 | 1,150 | 30 | 5 | 4,000 | 2480 |

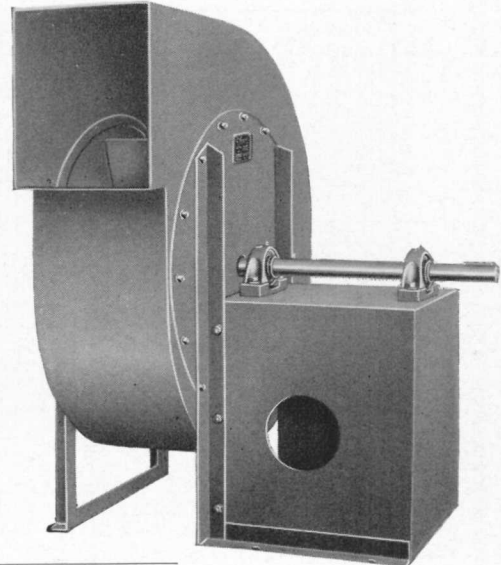
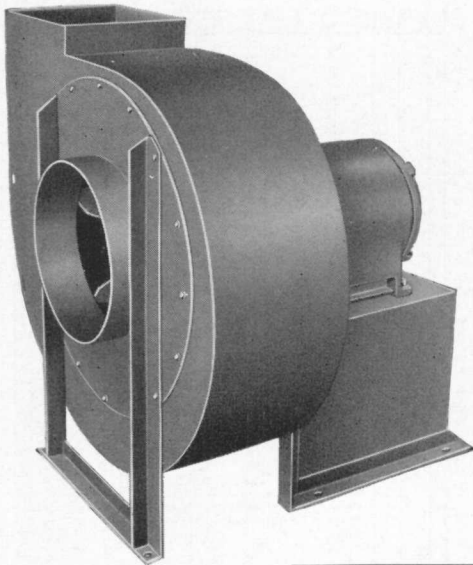


CHAMPION STEEL PLATE MILLEXHAUST FANS

Champion Adjustable Steel Plate Mill Exhausters remove shavings, chips and sawdust from woodworking machinery, and elevate cotton, cottonseed, hulls, etc., or any other fibrous material. The bearings are on one side, leaving the inlet unobstructed, so as to allow free ingress for such materials. These exhaust Fans are regularly furnished with Self-Aligning Ball Bearings.

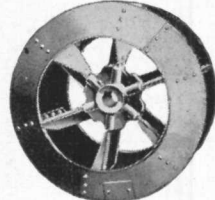
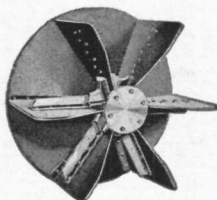
These Exhausters have housings suitable to either hand or any discharge. The advantages of the adjustable Exhauster are that one exhauster will meet any requirements regardless of the hand or discharge, avoiding all cross belts and sharp angles.

Bottom Horizontal discharge regularly furnished unless ordered otherwise.



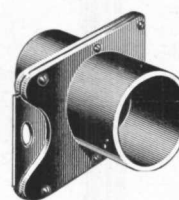
| Size | Wt. Belt Drive | Wt. Elect. Drive | H.P. | R.P.M. |
|------|----------------|------------------|------|--------|
| 25" | 350 | 435 | 2 | 1,725 |
| 30" | 400 | 600 | 5 | 1,725 |
| 35" | 510 | 950 | 15 | 1,725 |
| 40" | 680 | 1,250 | 25 | 1,725 |
| 45" | 775 | 1,450 | 15 | 1,140 |
| 50" | 1,000 | 1,600 | 25 | 1,140 |
| 55" | 1,350 | 1,700 | 15 | 860 |
| 60" | 1,500 | 2,400 | 25 | 860 |
| 70" | 1,900 | 3,000 | 50 | 860 |

CHAMPION BLAST WHEELS



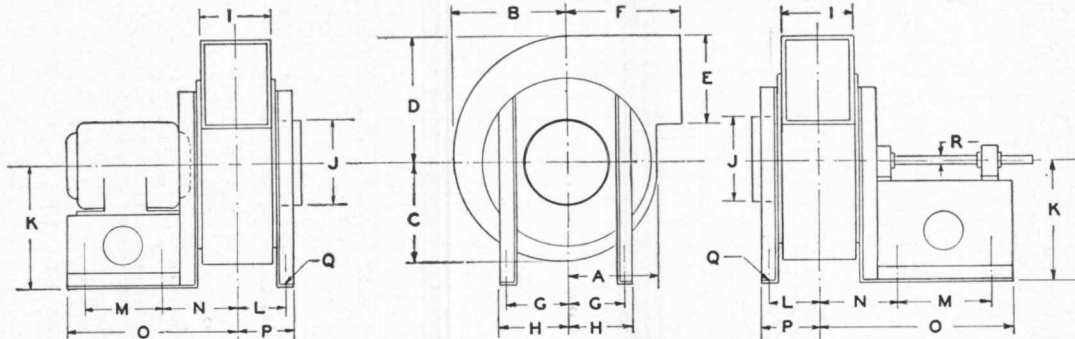
No. 1 Wheel for stringy material No. 2 Wheel for fine material

CHAMPION BLAST GATES



| Inches | Weight | Inches | Weight |
|--------|--------|--------|--------|
| 2 | 2 | 8 | 25 |
| 2 1/2 | 4 | 9 | 30 |
| 3 | 5 | 10 | 40 |
| 3 1/2 | 6 | 12 | 55 |
| 4 | 7 | 14 | 60 |
| 4 1/2 | 9 | 16 | 80 |
| 5 | 10 | 18 | 100 |
| 6 | 12 | 20 | 150 |
| 7 | 15 | 24 | 200 |

Dimensions of Steel Plate Mill Exhaust Fan



| Size | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | Key | Wheel Diam. |
|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----|--------|--------|--------|-------|-------|-----|-------------|
| 25 | 10 3/4 | 14 | 12 3/8 | 15 5/8 | 10 1/4 | 12 3/4 | 6 3/4 | 7 3/4 | 8 3/8 | 10 5/8 | 17 | 5 1/2 | 9 | 10 | 22 1/4 | 6 1/4 | 5 3/8 | 1 3/4 | 3/8 | 17 1/2 |
| 30 | 12 7/8 | 16 5/8 | 14 3/4 | 18 1/2 | 12 1/4 | 15 5/8 | 8 1/8 | 9 1/8 | 10 1/8 | 12 3/4 | 20 | 6 1/4 | 9 | 11 | 24 1/2 | 7 1/8 | 5 3/8 | 1 3/4 | 3/8 | 21 |
| 35 | 15 | 19 1/4 | 17 1/8 | 21 3/8 | 14 1/4 | 18 | 9 1/2 | 10 1/2 | 11 3/4 | 14 1/8 | 23 | 7 1/4 | 10 | 13 | 28 1/4 | 8 1/4 | 5 3/8 | 1 3/4 | 3/8 | 24 1/2 |
| 40 | 17 | 22 | 19 1/2 | 24 1/2 | 16 1/4 | 20 | 10 7/8 | 12 1/8 | 13 3/8 | 17 | 26 | 8 3/4 | 11 | 15 | 31 1/4 | 9 1/4 | 5 3/8 | 1 3/4 | 3/8 | 28 |
| 45 | 18 3/4 | 24 3/4 | 21 3/4 | 27 3/4 | 18 1/4 | 22 1/4 | 12 1/4 | 13 1/4 | 15 | 19 1/8 | 29 | 8 3/4 | 12 | 16 | 34 1/4 | 10 3/4 | 5 3/8 | 1 3/4 | 3/8 | 31 1/2 |
| 50 | 21 1/8 | 27 3/8 | 24 1/4 | 30 1/2 | 20 1/4 | 24 3/8 | 13 3/4 | 15 1/4 | 16 5/8 | 21 1/4 | 32 | 10 | 14 | 17 1/2 | 37 1/2 | 11 1/2 | 5 3/8 | 1 3/4 | 3/8 | 35 |
| 55 | 23 1/4 | 30 | 26 5/8 | 33 3/8 | 22 1/4 | 27 1/4 | 15 | 16 1/2 | 18 5/8 | 23 3/8 | 35 1/2 | 10 7/8 | 16 | 18 | 40 3/8 | 12 3/8 | 5 3/8 | 1 3/4 | 3/8 | 38 1/2 |
| 60 | 25 1/4 | 32 3/4 | 29 | 36 1/2 | 24 1/4 | 29 3/4 | 16 3/8 | 17 1/2 | 20 | 25 1/2 | 38 1/2 | 11 1/8 | 19 | 18 1/2 | 43 3/8 | 13 3/8 | 5 3/8 | 1 3/4 | 3/8 | 42 |
| 70 | 28 1/8 | 36 1/8 | 32 1/8 | 40 1/8 | 26 3/4 | 33 | 18 1/8 | 19 1/8 | 22 1/8 | 28 | 42 1/2 | 12 3/4 | 22 | 19 | 46 1/4 | 14 1/4 | 5 3/8 | 1 3/4 | 3/8 | 46 1/2 |



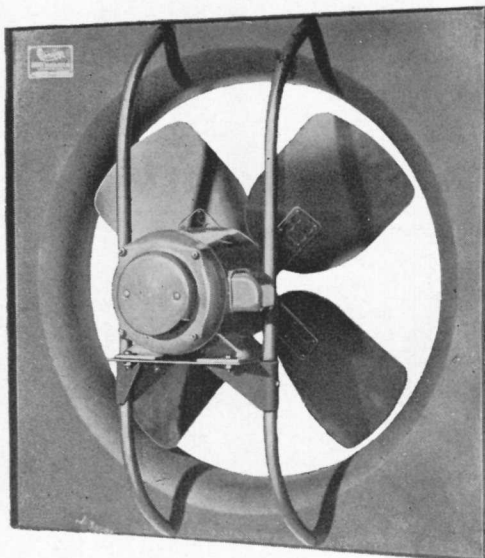
CHAMPION STEEL PLATE MILL EXHAUST FANS

| SIZE | C.F.M. | 1" S.P. | | 2" S.P. | | 3" S.P. | | 4" S.P. | | 5" S.P. | | 6" S.P. | | 7" S.P. | |
|------|--------|---------|--------|---------|--------|---------|--------|---------|--------|---------|--------|---------|--------|---------|--------|
| | | R.P.M. | B.H.P. | R.P.M. | B.H.P. | R.P.M. | B.H.P. | R.P.M. | B.H.P. | R.P.M. | B.H.P. | R.P.M. | B.H.P. | R.P.M. | B.H.P. |
| 25 | 890 | 878 | .27 | 1153 | .50 | 1386 | .74 | 1589 | .98 | 1760 | 1.23 | 1925 | 1.42 | 2075 | 1.70 |
| | 1128 | 952 | .38 | 1208 | .64 | 1410 | .90 | 1596 | 1.16 | 1775 | 1.50 | 1936 | 1.80 | 2085 | 2.13 |
| | 1345 | 1025 | .53 | 1263 | .81 | 1460 | 1.11 | 1640 | 1.41 | 1810 | 1.80 | 1958 | 2.12 | 2105 | 2.50 |
| | 1575 | 1121 | .70 | 1330 | 1.02 | 1518 | 1.36 | 1693 | 1.70 | 1850 | 2.13 | 1995 | 2.50 | 2130 | 2.92 |
| | 1426 | 695 | .42 | 915 | .75 | 1090 | 1.11 | 1241 | 1.46 | 1391 | 1.82 | 1502 | 2.10 | 1620 | 2.58 |
| 30 | 1780 | 748 | .60 | 949 | 1.00 | 1121 | 1.41 | 1272 | 1.88 | 1400 | 2.20 | 1530 | 2.61 | 1640 | 3.15 |
| | 2307 | 850 | .97 | 1022 | 1.44 | 1192 | 1.96 | 1326 | 2.51 | 1440 | 2.90 | 1575 | 3.53 | 1688 | 4.10 |
| | 2840 | 955 | 1.45 | 1115 | 2.03 | 1259 | 2.68 | 1390 | 3.27 | 1500 | 3.82 | 1630 | 4.60 | 1730 | 5.12 |
| | 1990 | 640 | .64 | 838 | 1.08 | 990 | 1.60 | 1125 | 2.00 | 1250 | 2.50 | 1360 | 2.90 | 1460 | 3.48 |
| | 2662 | 725 | 1.01 | 895 | 1.60 | 1040 | 2.19 | 1164 | 2.76 | 1291 | 3.10 | 1402 | 4.01 | 1498 | 4.64 |
| 35 | 3098 | 786 | 1.35 | 942 | 2.04 | 1080 | 2.71 | 1200 | 3.30 | 1319 | 4.10 | 1428 | 4.85 | 1520 | 5.60 |
| | 3542 | 850 | 1.78 | 998 | 2.54 | 1132 | 3.30 | 1248 | 4.03 | 1350 | 4.91 | 1462 | 5.70 | 1559 | 6.51 |
| | 2258 | 550 | .64 | 724 | 1.12 | 860 | 1.70 | 988 | 2.22 | 1099 | 2.80 | 1196 | 3.30 | 1284 | 3.95 |
| | 3100 | 615 | 1.06 | 775 | 1.75 | 902 | 2.40 | 1021 | 3.12 | 1128 | 3.81 | 1230 | 4.61 | 1313 | 5.29 |
| | 3962 | 699 | 1.70 | 836 | 2.52 | 960 | 3.30 | 1066 | 4.21 | 1166 | 5.03 | 1262 | 5.96 | 1342 | 6.82 |
| 40 | 4520 | 755 | 2.10 | 886 | 3.15 | 999 | 4.06 | 1105 | 5.01 | 1195 | 6.03 | 1295 | 7.05 | 1380 | 8.01 |
| | 3210 | 506 | .98 | 660 | 1.68 | 778 | 2.40 | 886 | 3.12 | 990 | 3.93 | 1072 | 4.65 | 1150 | 5.50 |
| | 4281 | 570 | 1.56 | 705 | 2.51 | 820 | 3.40 | 921 | 4.35 | 1015 | 5.30 | 1105 | 6.35 | 1181 | 7.31 |
| | 5348 | 646 | 2.42 | 765 | 3.55 | 872 | 4.65 | 972 | 5.67 | 1055 | 6.96 | 1140 | 8.21 | 1212 | 9.38 |
| | 6060 | 690 | 3.10 | 810 | 4.42 | 910 | 5.63 | 1002 | 7.05 | 1080 | 8.34 | 1172 | 9.55 | 1236 | 10.90 |
| 45 | 4065 | 450 | 1.20 | 585 | 2.12 | 690 | 3.05 | 790 | 3.99 | 880 | 4.98 | 956 | 5.95 | 1024 | 6.90 |
| | 5410 | 510 | 1.99 | 630 | 3.20 | 730 | 4.33 | 816 | 5.46 | 900 | 6.71 | 985 | 8.04 | 1050 | 9.26 |
| | 6760 | 575 | 3.05 | 680 | 4.50 | 775 | 5.91 | 861 | 7.26 | 938 | 8.85 | 1010 | 10.50 | 1081 | 11.90 |
| | 7675 | 625 | 4.12 | 725 | 5.62 | 810 | 7.20 | 890 | 8.96 | 967 | 10.71 | 1055 | 12.28 | 1102 | 14.01 |
| | 5462 | 427 | 1.75 | 540 | 2.90 | 640 | 4.12 | 726 | 5.40 | 806 | 6.65 | 876 | 8.00 | 940 | 9.40 |
| 55 | 7100 | 484 | 2.80 | 585 | 4.23 | 677 | 5.77 | 758 | 7.34 | 830 | 8.89 | 902 | 10.53 | 966 | 12.20 |
| | 8722 | 530 | 4.20 | 635 | 6.03 | 722 | 7.88 | 796 | 9.66 | 864 | 11.70 | 930 | 13.52 | 994 | 15.51 |
| | 9806 | 564 | 5.44 | 676 | 7.45 | 754 | 9.50 | 822 | 11.60 | 889 | 13.84 | 958 | 15.95 | 1010 | 18.00 |
| | 7250 | 403 | 2.47 | 506 | 4.00 | 590 | 5.65 | 668 | 7.30 | 736 | 8.87 | 804 | 10.70 | 860 | 12.40 |
| | 9231 | 457 | 3.94 | 546 | 6.14 | 630 | 7.80 | 698 | 9.75 | 764 | 11.80 | 825 | 13.96 | 884 | 16.15 |
| 60 | 10540 | 493 | 5.13 | 578 | 7.39 | 655 | 9.50 | 722 | 11.78 | 785 | 14.20 | 848 | 16.48 | 902 | 18.80 |
| | 11865 | 532 | 6.65 | 610 | 9.10 | 687 | 11.61 | 748 | 14.10 | 806 | 16.80 | 870 | 17.50 | 920 | 22.00 |
| | 10380 | 390 | 4.05 | 473 | 6.00 | 542 | 8.14 | 603 | 10.31 | 667 | 12.75 | 720 | 15.12 | 770 | 17.50 |
| | 11965 | 426 | 5.40 | 501 | 7.65 | 568 | 10.02 | 626 | 12.56 | 683 | 15.12 | 734 | 17.35 | 782 | 20.40 |
| | 13580 | 460 | 7.15 | 534 | 9.80 | 594 | 12.43 | 650 | 15.00 | 704 | 18.00 | 752 | 20.72 | 798 | 23.65 |
| 70 | 15150 | 496 | 9.18 | 568 | 12.30 | 622 | 15.05 | 674 | 18.00 | 726 | 21.11 | 772 | 24.00 | 815 | 27.00 |

| SIZE | C.F.M. | 8" S.P. | | 9" S.P. | | 10" S.P. | | 11" S.P. | | 12" S.P. | | 13" S.P. | | 14" S.P. | |
|------|--------|---------|--------|---------|--------|----------|--------|----------|--------|----------|--------|----------|--------|----------|--------|
| | | R.P.M. | B.H.P. | R.P.M. | B.H.P. | R.P.M. | B.H.P. | R.P.M. | B.H.P. | R.P.M. | B.H.P. | R.P.M. | B.H.P. | R.P.M. | B.H.P. |
| 25 | 1575 | 2270 | 3.36 | 2390 | 3.70 | 2530 | 4.30 | 2620 | 4.61 | 2722 | 4.75 | 2840 | 5.60 | 2970 | 5.81 |
| | 1892 | 2330 | 4.20 | 2438 | 4.50 | 2561 | 5.11 | 2660 | 4.91 | 2756 | 6.03 | 2871 | 6.62 | 2998 | 7.31 |
| | 2230 | 2395 | 4.99 | 2500 | 5.50 | 2622 | 6.10 | 2719 | 6.61 | 2813 | 7.15 | 2915 | 7.75 | 3028 | 8.40 |
| | 2565 | 4482 | 6.00 | 2590 | 6.20 | 2698 | 6.89 | 2800 | 7.90 | 2890 | 8.50 | 2990 | 9.22 | 3075 | 9.72 |
| | 2307 | 1790 | 4.63 | 1890 | 5.30 | 1977 | 5.79 | 2060 | 6.30 | 2161 | 7.00 | 2230 | 7.61 | 2310 | 8.11 |
| 30 | 2840 | 1830 | 5.80 | 1932 | 6.52 | 2020 | 7.18 | 2110 | 7.99 | 2201 | 8.81 | 2275 | 9.20 | 2345 | 9.90 |
| | 3371 | 1892 | 7.27 | 1985 | 8.00 | 2080 | 8.91 | 2160 | 9.70 | 2253 | 10.44 | 2320 | 11.03 | 2390 | 12.05 |
| | 4075 | 1975 | 9.44 | 2060 | 10.39 | 2152 | 11.50 | 2233 | 12.53 | 2315 | 13.21 | 2391 | 13.21 | 2451 | 14.90 |
| | 3098 | 1620 | 6.41 | 1708 | 7.08 | 1790 | 7.85 | 1864 | 8.71 | 1942 | 9.40 | 2015 | 10.12 | 2080 | 10.90 |
| | 3542 | 1648 | 7.38 | 1732 | 8.20 | 1812 | 9.01 | 1889 | 9.99 | 1970 | 10.81 | 2042 | 11.56 | 2105 | 12.50 |
| 35 | 4200 | 1695 | 9.08 | 1778 | 10.08 | 1860 | 11.08 | 1932 | 12.10 | 2012 | 12.98 | 2083 | 13.84 | 2144 | 15.10 |
| | 5090 | 1768 | 11.81 | 1850 | 13.01 | 1927 | 14.28 | 1998 | 15.30 | 2080 | 16.42 | 2144 | 17.51 | 2195 | 18.64 |
| | 3962 | 1430 | 7.84 | 1510 | 8.80 | 1589 | 9.66 | 1650 | 10.72 | 1718 | 11.61 | 1780 | 12.50 | 1844 | 13.56 |
| | 4520 | 1460 | 9.05 | 1530 | 10.11 | 1603 | 11.12 | 1675 | 12.38 | 1744 | 13.30 | 1805 | 14.26 | 1864 | 15.55 |
| | 5360 | 1497 | 11.21 | 1575 | 12.50 | 1643 | 13.68 | 1710 | 14.99 | 1780 | 16.84 | 1841 | 17.33 | 1896 | 18.60 |
| 40 | 6505 | 1567 | 14.16 | 1636 | 16.06 | 1710 | 17.75 | 1769 | 18.91 | 1839 | 20.31 | 1898 | 21.67 | 1948 | 23.16 |
| | 6060 | 1310 | 12.24 | 1375 | 13.65 | 1440 | 15.10 | 1498 | 16.50 | 1560 | 17.81 | 1620 | 19.20 | 1665 | 20.80 |
| | 7125 | 1348 | 15.18 | 1415 | 16.61 | 1478 | 18.30 | 1538 | 19.99 | 1596 | 20.96 | 1651 | 22.85 | 1699 | 24.80 |
| | 7842 | 1375 | 17.20 | 1440 | 19.01 | 1505 | 20.95 | 1560 | 22.41 | 1620 | 24.30 | 1675 | 25.75 | 1720 | 27.50 |
| | 8545 | 1410 | 19.69 | 1472 | 21.51 | 1538 | 23.67 | 1591 | 25.28 | 1650 | 27.12 | 1697 | 28.81 | 1740 | 30.60 |
| 45 | 7675 | 1164 | 15.54 | 1224 | 17.30 | 1280 | 19.10 | 1330 | 20.90 | 1390 | 22.70 | 1435 | 24.10 | 1480 | 26.40 |
| | 8975 | 1199 | 19.28 | 1260 | 21.05 | 1305 | 23.12 | 1361 | 25.30 | 1420 | 27.41 | 1462 | 28.88 | 1510 | 31.46 |
| | 9890 | 1224 | 21.81 | 1280 | 24.10 | 1331 | 26.40 | 1385 | 28.51 | 1440 | 30.75 | 1487 | 32.61 | 1530 | 34.90 |
| | 10870 | 1250 | 24.90 | 1306 | 27.20 | 1360 | 30.00 | 1410 | 32.00 | 1462 | 34.31 | 1508 | 36.53 | 1544 | 38.35 |
| | 9806 | 1066 | 20.10 | 1120 | 22.26 | 1178 | 24.68 | 1224 | 24.00 | 1272 | 29.30 | 1320 | 31.12 | 1360 | 34.00 |
| 55 | 10890 | 1090 | 23.20 | 1145 | 25.48 | 1198 | 28.02 | 1244 | 30.60 | 1292 | 33.00 | 1340 | 35.00 | 1378 | 38.01 |
| | 11980 | 1115 | 26.30 | 1168 | 29.20 | 1220 | 32.00 | 1265 | 34.51 | 1316 | 37.31 | 1358 | 39.81 | 1397 | 42.31 |
| | 13072 | 1140 | 30.12 | 1190 | 32.82 | 1245 | 35.75 | 1289 | 39.01 | 1336 | 41.78 | 1376 | 44.20 | 1412 | 47.00 |
| | 11865 | 968 | 24.41 | 1020 | 27.15 | 1068 | 30.00 | 1112 | 32.89 | 1157 | 35.41 | 1197 | 37.60 | 1236 | 41.50 |
| | 13197 | 990 | 28.20 | 1039 | 30.96 | 1087 | 33.99 | 1127 | 37.14 | 1177 | 40.21 | 1215 | 42.41 | 1250 | 46.22 |
| 60 | 14500 | 1012 | 31.90 | 1058 | 35.30 | 1106 | 38.85 | 1149 | 41.85 | 1173 | 45.20 | 1235 | 47.96 | 1268 | 51.32 |
| | 15828 | 1034 | 36.57 | 1080 | 39.98 | 1129 | 43.97 | 1167 | 46.98 | 1215 | 50.72 | 1250 | 53.72 | 1281 | 57.05 |
| | 15150 | 860 | 30.30 | 905 | 34.30 | 947 | 37.62 | 986 | 40.63 | 1022 | 43.89 | 1060 | 48.04 | 1096 | 50.99 |
| | 16762 | 884 | 35.08 | 924 | 38.55 | 963 | 42.61 | 1005 | 46.08 | 1036 | 49.47 | 1077 | 53.61 | 1111 | 57.37 |
| | 18355 | 907 | 39.85 | 945 | 43.78 | 985 | 47.34 | 1020 | 51.63 | 1057 | 55.92 | 1092 | 60.00 | 1126 | 63.74 |
| 70 | 19980 | 930 | 45.10 | 968 | 49.25 | 1006 | 53.31 | 1040 | 57.27 | 1075 | 61.76 | 1110 | 65.90 | 1140 | 70.40 |



CHAMPION SUPER-VENT FANS



A ventilating fan with dynamic ventilating ability, yet economic to purchase and to install. Rigid in construction with ample power and low current consumption. The slower speeds listed are for quiet operation in the office, store or home. Higher speeds for the factory. This fan is suitable for any kind of ventilation including a short run of duct work from fume hoods or interior parts of a building.

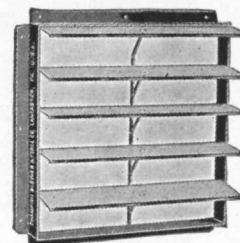
Fan wheel of heavy pressed steel both statically and dynamically balanced. Heavy square steel frame for easy mounting. All motors totally enclosed and quiet in operation.

CHAMPION AUTOMATIC SHUTTERS

Champion Automatic Shutters are used with Champion Super Ventilating Fans to keep out snow, rain, cold air and drafts, as well as insects and flies, when the Fans are not in operation.

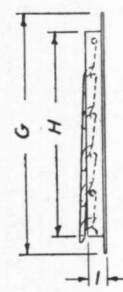
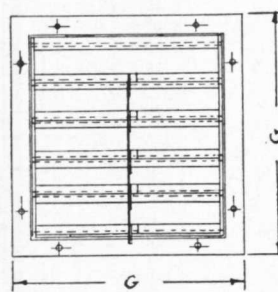
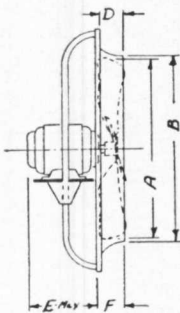
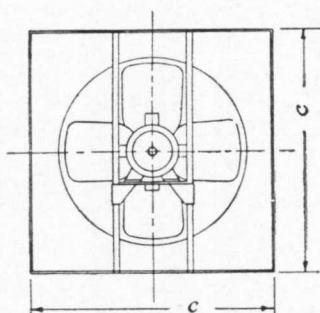
They open automatically from air pressure from the Fan. When the Fan is not running the shutter blades close automatically.

| Size | Weight |
|------|---------|
| 12" | 18 lbs. |
| 16" | 22 lbs. |
| 18" | 24 lbs. |
| 24" | 30 lbs. |
| 30" | 38 lbs. |
| 36" | 45 lbs. |
| 42" | 55 lbs. |
| 48" | 58 lbs. |



| Size | C.F.M. 0"-S.P. | C.F.M. 1/4"-S.P. | C.F.M. 1/2"-S.P. | R.P.M. | H.P. | Weight |
|------|-------------------|---------------------|---------------------|--------|-------|--------|
| 12" | 1,500 | 1,250 | 625 | 1,725 | 1/12 | 30 |
| 12" | 1,000 | 575 | ... | 1,140 | 1/20 | 30 |
| 16" | 2,600 | 2,400 | 2010 | 1,725 | 1/3 | 90 |
| 16" | 1,720 | 1,400 | 770 | 1,140 | 1/8 | 55 |
| 18" | 4,000 | 3,700 | 2900 | 1,725 | 3/4 | 90 |
| 18" | 2,650 | 2,250 | 1370 | 1,140 | 1/4 | 78 |
| 24" | 6,000 | 5,300 | 4425 | 1,140 | 1 | 140 |
| 24" | 4,500 | 3,400 | 1850 | 860 | 1/3 | 185 |
| 30" | 8,000 | 7,100 | 5300 | 860 | 1/2 | 220 |
| 30" | 6,500 | 5,200 | 4560 | 690 | 1/3 | 200 |
| 36" | 13,000 | 11,000 | 8800 | 690 | 1 1/2 | 300 |

Fans NAFM code tested.



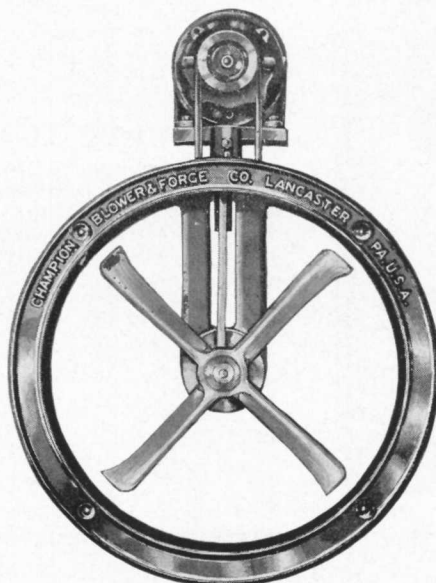
Dimensions are in Inches.

| Size | A | B | C | D | E | F | G | H | I | Blades | No. Louvres |
|------|----|--------|----|--------|---------|--------|----|----|-------|--------|-------------|
| 12 | 12 | 12 1/2 | 17 | 1 5/16 | 8 1/2 | 2 3/4 | 15 | 12 | 1 1/2 | 3 | 4 |
| 16 | 16 | 16 1/2 | 26 | 2 7/16 | 8 1/2 | 3 7/16 | 19 | 16 | 1 1/2 | 3 | 5 |
| 18 | 18 | 18 1/2 | 28 | 2 3/4 | 10 1/2 | 3 3/4 | 21 | 18 | 1 1/2 | 3 | 5 |
| 24 | 24 | 24 1/2 | 34 | 3 5/8 | 11 5/8 | 4 3/4 | 27 | 24 | 1 1/2 | 4 | 6 |
| 30 | 30 | 30 3/4 | 36 | 3 3/4 | 13 3/16 | 6 1/2 | 33 | 30 | 1 1/2 | 4 | 7 |
| 36 | 36 | 36 3/4 | 46 | 4 1/4 | 15 3/4 | 5 | 39 | 36 | 1 1/2 | 5 | 7 |



CHAMPION VENTILATING FANS

For Spray Room Cabinets and Spray Rooms



Champion Ventilating Fans for use in connection with spraying paint are constructed to meet all requirements of the Fire Underwriters. The frame is substantial, with the motor arranged on a base attached to frame in order that the fumes from spray do not come in contact with the motor to cause ignition and to gum and clog the motor.

The Fan Wheel operates on two self-aligning double-row Ball Bearings which are tightly sealed to hold grease for lubrication and to prevent fire hazard.

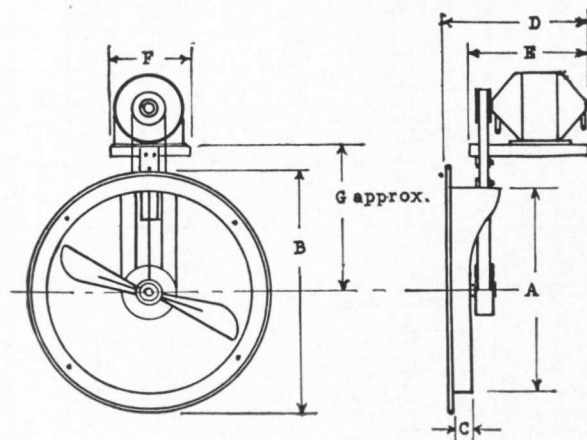
The Fan Blade is cast aluminum, making it sparkproof.

The Oiling Device for the bearings on the fan is conveniently arranged to use a grease gun.

The Belt is entirely enclosed inside the frame; therefore, no spray can come in contact with the belt. The tube through which the belt runs is open between the outside rim of the fan frame and the motor—thereby not only cooling the belt, but circulating a continuous current of air through the chamber to the pulley and bearings, giving an air-cooled belt, pulley and bearings.

The Motor Base is adjustable in order to keep the belt at proper tension.

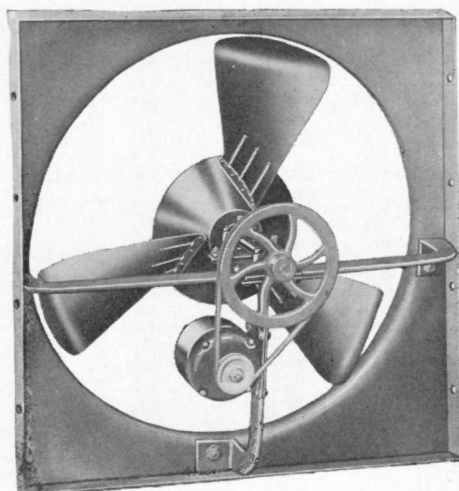
| Fan No. | Dia. | CFM | HP | Weight |
|---------|------|------|----------------|--------|
| 18 A | 18" | 3200 | $\frac{1}{4}$ | 125 |
| 18 B | 18" | 4400 | $\frac{1}{2}$ | 132 |
| 18 C | 18" | 5000 | $\frac{3}{4}$ | 145 |
| 24 A | 24" | 6000 | 1 | 275 |
| 24 B | 24" | 7400 | $1\frac{1}{2}$ | 290 |
| 24 C | 24" | 8000 | 2 | 320 |



| DIMENSIONS | | | | | | | |
|------------|-----------------|-----------------|----------------|-----------------|----------------|----------------|--------------------|
| No. | A | B | C | D | E | F | G Fan Dia. |
| 18 In. | $19\frac{1}{4}$ | $22\frac{1}{2}$ | 2 | 11 | $7\frac{3}{4}$ | $6\frac{1}{2}$ | $14\frac{1}{4}$ 18 |
| 24 In. | $25\frac{3}{4}$ | $29\frac{3}{4}$ | $2\frac{1}{2}$ | $16\frac{1}{2}$ | 12 | $8\frac{3}{4}$ | $18\frac{1}{2}$ 24 |



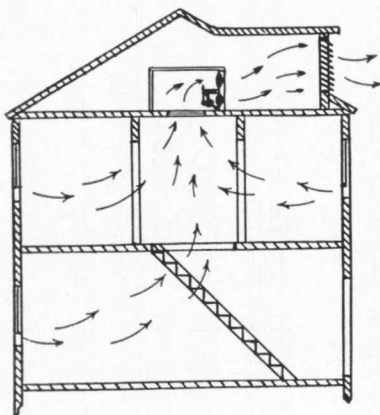
CHAMPION ATTIC FAN



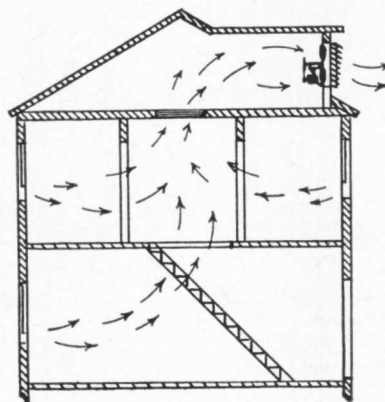
Champion Attic Fans bring in night air quietly at trifling cost to operate.

Sleepless nights are unnecessary. With little expenditure you can enjoy cool night air over your bed, causing curtains to raise enough to let the outside air in your bedroom, and every other room in the house. Average air change necessary, thirty changes an hour, or sixty changes an hour in tropics, for whole house ventilation.

Note simplicity of Fan, Heavy Deep Drawn frame with flat streamlined Arm supporting bearings; Motor Bracket Brace is also flat streamlined. Bearings are Bronze Graphite Lined, requiring oil only twice a season. Braces are all streamlined to prevent retardation—so this Champion Fan will deliver the maximum amount of air, with the least horsepower. The Blades are strong, balanced perfectly and run vibrationless, and will not bend out of shape, throwing wheel out of balance—all are sold with our guarantee.



Fans can be installed and arranged according to either illustration shown. They can either be mounted in the window, or in the gable end of the attic. The other type of installation is in a box, which can be constructed of Celotex or Masonite or Lumber. This box being mounted directly above the grill through which air is drawn from the lower floor.

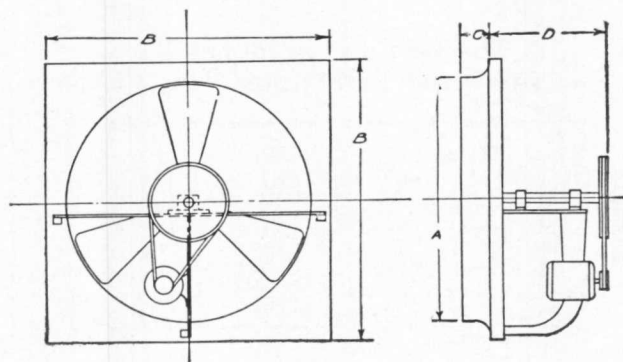


| Size | Cap F.P.M. | H.P. Motor | Motor Speed | Fan Speed | Watt Imput | Shipping Weight |
|------|---------------|---------------|----------------|--------------|---------------|--------------------|
| 30" | 5,000 | $\frac{1}{6}$ | 1,725 | 490 | 235 | 160 lbs. |
| 36" | 7,500 | $\frac{1}{4}$ | 1,725 | 400 | 315 | 200 lbs. |
| 42" | 10,000 | $\frac{1}{3}$ | 1,725 | 320 | 350 | 275 lbs. |
| 48" | 13,000 | $\frac{1}{2}$ | 1,725 | 270 | 450 | 340 lbs. |

5% extra for Ball Bearings

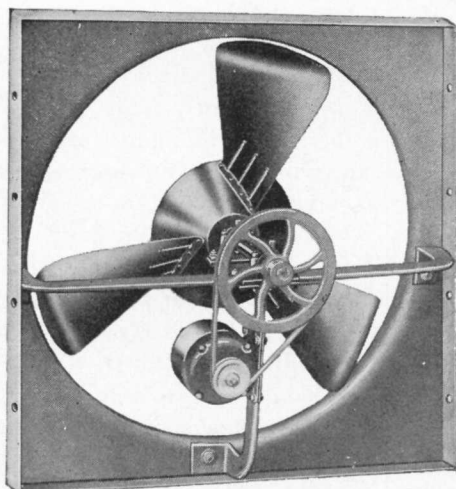
DIMENSIONS OF ATTIC FANS

| Size | A | B | C | D |
|------|-----|-----|-------------------|--------------------|
| 30" | 31" | 40" | 6 $\frac{1}{2}$ " | 11 $\frac{1}{4}$ " |
| 36" | 37" | 46" | 5 $\frac{1}{2}$ " | 11 $\frac{1}{2}$ " |
| 42" | 43" | 52" | 5 $\frac{1}{2}$ " | 12 $\frac{1}{2}$ " |
| 48" | 49" | 58" | 5 $\frac{1}{2}$ " | 15 $\frac{1}{4}$ " |



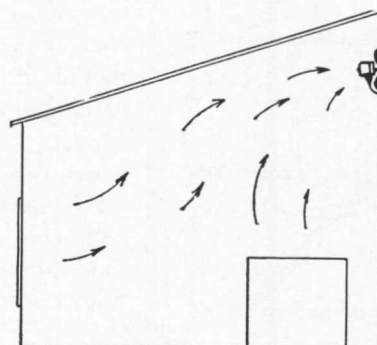
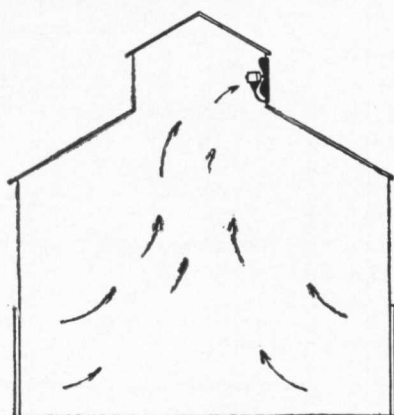


CHAMPION INDUSTRIAL VENTILATING FANS



A low cost ventilating fan producing a large volume of air for every type of general industrial ventilation. Especially useful in the monitor of foundry roof to remove smoke and dust as well as heat in the summer. Can be installed over ovens to eliminate heat and over plating and pickling tanks to remove fumes. This type of fan can be used with short sections of duct work to exhaust from fume hoods.

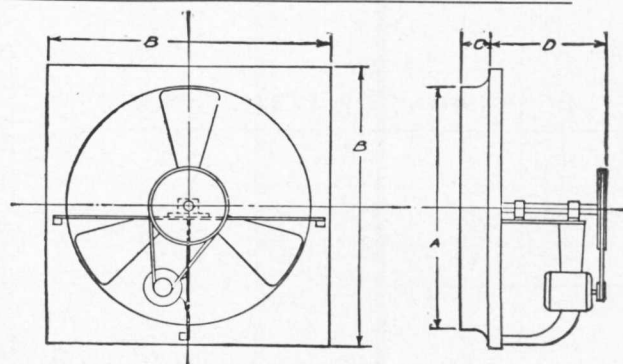
The wheels are die formed and quiet in operation. Bearings are Ball Bearing Pillow Block Type. Motors used in dusty atmosphere should be of the enclosed type. Entire unit mounted on a square steel panel easily installed. Fans can be used with automatic shutter on the outside for weather-proofing.



| Size | C.F.M. | H.P. | Motor Speed | Fan Speed | Weight |
|------|--------|---------------|-------------|-----------|--------|
| 18" | 2,500 | $\frac{1}{6}$ | 1,725 | 1,140 | 115 |
| 24" | 4,000 | $\frac{1}{4}$ | 1,725 | 860 | 125 |
| 30" | 6,500 | $\frac{1}{3}$ | 1,725 | 690 | 140 |
| 36" | 10,000 | $\frac{1}{2}$ | 1,725 | 550 | 180 |
| 42" | 13,500 | $\frac{3}{4}$ | 1,725 | 450 | 300 |
| 48" | 17,000 | 1 | 1,725 | 370 | 400 |

Dimensions—in inches
Industrial Ventilating Fans

| Size | A | B | C | D |
|------|------------------|----|------------------|------------------|
| 18 | 18 $\frac{1}{2}$ | 28 | 23 $\frac{3}{4}$ | 10 |
| 24 | 24 $\frac{1}{2}$ | 34 | 35 $\frac{5}{8}$ | 11 |
| 30 | 31 | 40 | 33 $\frac{3}{4}$ | 11 $\frac{1}{4}$ |
| 36 | 37 | 46 | 41 $\frac{1}{8}$ | 11 $\frac{1}{2}$ |
| 42 | 43 | 52 | 41 $\frac{1}{2}$ | 12 $\frac{1}{2}$ |
| 48 | 49 | 58 | 5 | 15 $\frac{1}{4}$ |





CHAMPION DISC WHEEL AND MINE FAN

The New Champion Disc Wheel and Mine Fan is strictly first class, built strong and substantial. Its blades are made of special rolled steel, mechanically fitted into a grooved hub, where they are securely fastened. They are built with workmanship of the very highest grade, and run entirely noiseless, and are guaranteed to give perfect satisfaction.

The bearings are regularly furnished with Self-Aligning Ball Bearings, and the shaft is made from hammered steel, extra length, so that pulleys can be placed on either side, thus preventing cross belts.

These fans are especially constructed for ventilating, and can be used for factories, laundries, restaurants, offensive closet ventilation; in fact, any place where a supply of fresh air is desired.

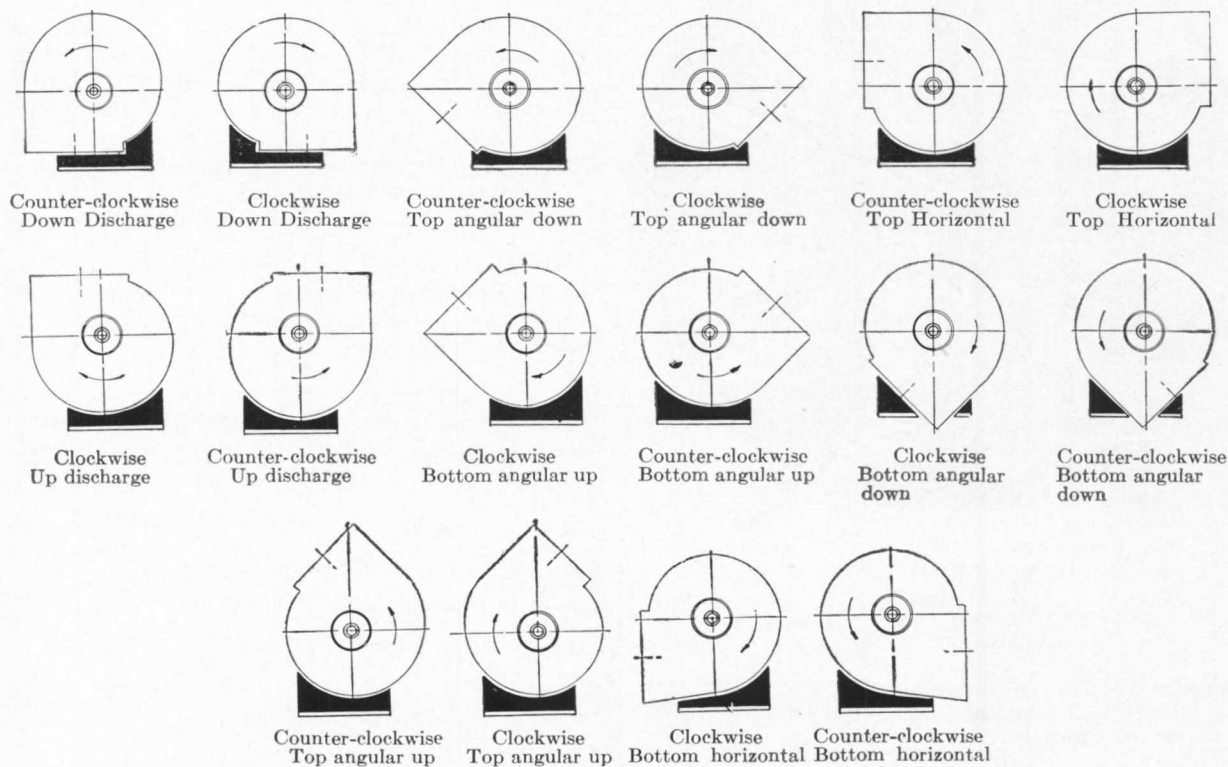
| Diameter of Wheel, Inches | Weight | Diameter of Pulley | Face of Pulley | Diameter of Wheel, Inches | Weight | Diameter of Pulley | Face of Pulley |
|---------------------------|--------|--------------------|----------------|---------------------------|--------|--------------------|----------------|
| 18 | 90 | 4" | 2" | 48 | 405 | 9" | 4" |
| 24 | 115 | 4" | 2" | 54 | 425 | 9" | 4" |
| 30 | 160 | 6" | 2" | 60 | 515 | 10" | 5" |
| 36 | 180 | 6" | 2" | 72 | 800 | 12" | 5½" |
| 42 | 350 | 8" | 3½" | 84 | 900 | 14" | 6" |

**TABLE OF SPEEDS, CAPACITIES, ETC., OF CHAMPION DISC WHEELS
AND MINE FANS FOR MINE VENTILATION**

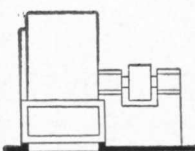
| Fan Size | ¼" Pressure | | | ½" Pressure | | | ¾" Pressure | | | 1" Pressure | | | 1½" Pressure | | |
|----------|-------------|----------|-------|-------------|----------|-------|-------------|----------|-------|-------------|----------|-------|--------------|----------|-------|
| | C. F. M. | R. P. M. | H. P. | C. F. M. | R. P. M. | H. P. | C. F. M. | R. P. M. | H. P. | C. F. M. | R. P. M. | H. P. | C. F. M. | R. P. M. | H. P. |
| 18" | 1,000 | 625 | .20 | 2,100 | 725 | .45 | 3,300 | 825 | .75 | 4,500 | 925 | 1.00 | 5,600 | 1050 | 1.75 |
| 24" | 2,000 | 560 | .25 | 3,500 | 650 | .50 | 4,700 | 775 | 1.00 | 5,200 | 875 | 1.25 | 6,500 | 925 | 2.00 |
| 30" | 3,500 | 500 | .35 | 4,500 | 600 | .75 | 6,000 | 725 | 1.50 | 7,900 | 825 | 2.00 | 9,900 | 875 | 2.50 |
| 36" | 6,000 | 450 | .50 | 7,500 | 560 | 1.00 | 9,200 | 680 | 2.00 | 10,300 | 730 | 2.50 | 12,900 | 790 | 3.75 |
| 42" | 9,000 | 400 | 1.00 | 10,750 | 485 | 1.75 | 12,350 | 570 | 2.75 | 15,000 | 640 | 4.00 | 16,500 | 695 | 5.25 |
| 48" | 12,200 | 350 | 1.25 | 14,700 | 435 | 2.25 | 16,700 | 500 | 3.50 | 18,700 | 560 | 5.25 | 21,000 | 615 | 7.00 |
| 54" | 15,500 | 305 | 1.50 | 18,500 | 380 | 2.75 | 21,100 | 440 | 4.50 | 24,000 | 495 | 6.50 | 26,800 | 535 | 8.75 |
| 60" | 18,500 | 280 | 2.00 | 22,500 | 340 | 3.50 | 25,700 | 400 | 5.50 | 29,500 | 450 | 8.00 | 33,800 | 485 | 11.00 |
| 72" | 25,800 | 230 | 2.50 | 31,000 | 285 | 5.00 | 36,400 | 330 | 8.00 | 40,500 | 375 | 11.25 | 46,000 | 410 | 15.25 |
| 84" | 35,500 | 200 | 4.00 | 43,500 | 245 | 7.00 | 49,500 | 275 | 10.75 | 54,000 | 315 | 15.50 | 61,500 | 340 | 21.00 |

If resistance is less than has been assumed in above table, the pressure will be lower and the volume of air delivered will be more and horsepower less.

STANDARD DESIGNATION OF FAN DISCHARGE AS ADOPTED BY THE FAN MANUFACTURERS ASSOCIATION

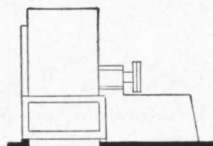


STANDARD DRIVE ARRANGEMENTS



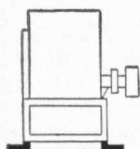
Arrangement No. 1

For Belt or Rope Drive or Direct Coupling. Overhung wheel, housing, two bearings on drive side, shaft and pulley or flexible coupling, on pedestal, single inlet only, all sizes.



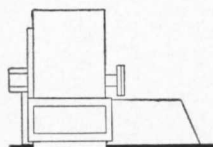
Arrangement No. 5

Direct Motor Connection. Overhung wheel, housing, shaft, one bearing on drive side, coupling and motor base. Single inlet only, all sizes.



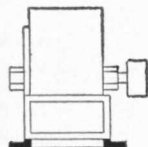
Arrangement No. 2

For Belt or Rope Drive or Direct Coupling. Overhung wheel, housing, two ball bearings on drive side, shaft and overhung pulley or flexible coupling, single inlet only, size No. 1 to No. 6 inclusive.



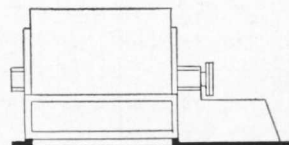
Arrangement No. 6

Direct Motor Connection. Wheel, housing, shaft, one bearing on inlet, coupling, and motor base. Single inlet only, all sizes.



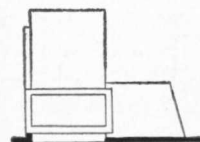
Arrangement No. 3

For Belt or Rope Drive or Direct Coupling. Wheel, housing, shaft, two bearings (one on each side of fan), overhung pulley or flexible coupling. Single or double width all sizes.



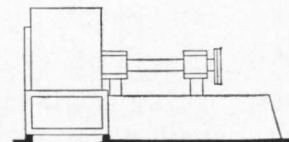
Arrangement No. 7

Direct Motor Connection. Wheel housing, shaft, two bearings (one on each side of fan), coupling, and motor base. Single and Double Inlet and Width, all sizes.



Arrangement No. 4

Direct Motor Connection. Overhung wheel, housing, motor pedestal. Wheel is attached to extended motor shaft. Single inlet only. Size No. 6 and smaller.



Arrangement No. 8

Direct Motor Connection. Same as Arrangement No. 5, but with two bearings between coupling and housing. Single inlet only, and sizes No. 6½ and larger.



BASIC FAN LAWS

When a fan is operated on a given system the following relations apply:

Constant air density, variation in RPM

1. CFM varies directly as the speed ratio $\frac{CFM_1}{CFM} = \frac{RPM_1}{RPM}$
2. Pressures vary directly as the square of the speed ratio $\frac{P_1}{P} = \left(\frac{RPM_1}{RPM} \right)^2$
3. Horsepower varies directly as the speed ratio $\frac{HP_1}{HP} = \left(\frac{RPM_1}{RPM} \right)^3$

Constant RPM, varying air density

4. CFM remains constant
5. Pressures vary directly with air density $\frac{P_1}{P} = \frac{d_1}{d}$
6. Horsepower varies directly with air density $\frac{HP_1}{HP} = \frac{d_1}{d}$

Constant tip speed of wheel, variation in fan size

7. Pressures remain constant
8. CFM varies as the square of the wheel diameter $\frac{CFM_1}{CFM} = \left(\frac{D_1}{D} \right)^2$
9. Horsepower varies as the square of the wheel diameter $\frac{HP_1}{HP} = \left(\frac{D_1}{D} \right)^2$
10. RPM varies inversely as the wheel diameter $\frac{RPM_1}{RPM} = \frac{D}{D_1}$

Constant RPM, variation in fan size

11. CFM varies as cube of wheel diameter $\frac{CFM_1}{CFM} = \left(\frac{D_1}{D} \right)^3$
12. Pressures vary as square of wheel diameter $\frac{P_1}{P} = \left(\frac{D_1}{D} \right)^2$

13. Horsepower varies as fifth power of wheel diameter $\frac{HP_1}{HP} = \left(\frac{D_1}{D} \right)^5$

Variation in fan size and speed

14. CFM varies as cube of wheel diameter x speed ratio $\frac{CFM_1}{CFM} = \left(\frac{D_1}{D} \right)^3 \times \frac{RPM_1}{RPM}$
15. Pressures vary as square of wheel diameter x square of speed ratio $\frac{P_1}{P} = \left(\frac{D_1}{D} \right)^2 \times \left(\frac{RPM_1}{RPM} \right)^2$
16. Horsepower varies as wheel diameter⁵ x speed ratio³ $\frac{HP_1}{HP} = \left(\frac{D_1}{D} \right)^5 \times \left(\frac{RPM_1}{RPM} \right)^3$

Horsepowers and efficiency

17. Horsepower output = $\frac{CFM \times TP}{6356}$
18. Horsepower input = Horsepower required to drive fan
19. Mechanical Efficiency = $\frac{\text{Horsepower output}}{\text{Horsepower input}}$
20. Static Efficiency = Mech. efficiency times ratio of static and total pressure

CFM = Cubic feet per minute
 RPM = Revolutions per minute
 P = Either static or total pressure
 TP = Total pressure
 HP = Horsepower
 d = Air density
 D = Wheel diameter

TEMPERATURE-DENSITY TABLE FOR AIR

Temp. in deg. Fahr. Standard Air = 70° F. = 1.

| Temp. | Dens. | Temp. | Dens. | Temp. | Dens. | Temp. | Dens. | Temp. | Dens. |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| —10 | 1.178 | 60 | 1.019 | 100 | .946 | 200 | .803 | 400 | .616 |
| —5 | 1.165 | 62 | 1.015 | 105 | .938 | 210 | .791 | 425 | .599 |
| 0 | 1.152 | 64 | 1.011 | 110 | .930 | 220 | .779 | 450 | .582 |
| 5 | 1.140 | 66 | 1.008 | 115 | .922 | 230 | .768 | 475 | .567 |
| 10 | 1.128 | 68 | 1.004 | 120 | .914 | 240 | .757 | 500 | .552 |
| 15 | 1.116 | 70 | 1.000 | 125 | .906 | 250 | .747 | 525 | .538 |
| 20 | 1.104 | 72 | .996 | 130 | .898 | 260 | .736 | 550 | .525 |
| 25 | 1.093 | 74 | .992 | 135 | .891 | 270 | .726 | 575 | .512 |
| 30 | 1.082 | 76 | .989 | 140 | .883 | 280 | .716 | 600 | .500 |
| 35 | 1.071 | 78 | .985 | 145 | .876 | 290 | .707 | 625 | .488 |
| 40 | 1.060 | 80 | .982 | 150 | .869 | 300 | .697 | 650 | .477 |
| 42 | 1.056 | 82 | .978 | 155 | .862 | 310 | .688 | 675 | .467 |
| 44 | 1.052 | 84 | .974 | 160 | .855 | 320 | .680 | 700 | .457 |
| 46 | 1.047 | 86 | .971 | 165 | .848 | 330 | .671 | 725 | .447 |
| 48 | 1.043 | 88 | .967 | 170 | .841 | 340 | .662 | 750 | .438 |
| 50 | 1.039 | 90 | .964 | 175 | .835 | 350 | .654 | 775 | .429 |
| 52 | 1.035 | 92 | .960 | 180 | .828 | 360 | .646 | 800 | .421 |
| 54 | 1.031 | 94 | .957 | 185 | .822 | 370 | .638 | 825 | .412 |
| 56 | 1.027 | 96 | .953 | 190 | .815 | 380 | .631 | 850 | .404 |
| 58 | 1.023 | 98 | .950 | 195 | .809 | 390 | .624 | 875 | .397 |



ALTITUDE-DENSITY TABLE FOR AIR

Altitudes in Feet—Standard Air at 0 Alt. (29.92 In. Bar.) = 1.

| Alt. | Den. | Bar. | Alt. | Den. | Bar. | Alt. | Den. | Bar. | Alt. | Den. | Bar. |
|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| 0 | 1.00 | 29.92 | 1500 | .944 | 28.26 | 3000 | .891 | 26.68 | 6000 | .795 | 23.79 |
| 100 | .996 | 29.81 | 1600 | .941 | 28.15 | 3200 | .885 | 26.48 | 6200 | .789 | 23.61 |
| 200 | .992 | 29.70 | 1700 | .937 | 28.04 | 3400 | .878 | 26.28 | 6400 | .784 | 23.43 |
| 300 | .989 | 29.58 | 1800 | .933 | 27.93 | 3600 | .872 | 26.08 | 6600 | .778 | 23.26 |
| 400 | .985 | 29.47 | 1900 | .930 | 27.83 | 3800 | .865 | 25.88 | 6800 | .772 | 23.08 |
| 500 | .981 | 29.36 | 2000 | .926 | 27.72 | 4000 | .858 | 25.68 | 7000 | .766 | 22.90 |
| 600 | .977 | 29.25 | 2100 | .923 | 27.62 | 4200 | .852 | 25.49 | 7200 | .760 | 22.73 |
| 700 | .974 | 29.14 | 2200 | .919 | 27.51 | 4400 | .846 | 25.30 | 7400 | .754 | 22.56 |
| 800 | .970 | 29.02 | 2300 | .916 | 27.41 | 4600 | .839 | 25.10 | 7600 | .748 | 22.38 |
| 900 | .966 | 28.91 | 2400 | .912 | 27.30 | 4800 | .833 | 24.91 | 7800 | .743 | 22.21 |
| 1000 | .962 | 28.80 | 2500 | .909 | 27.20 | 5000 | .826 | 24.72 | 8000 | .737 | 22.04 |
| 1100 | .959 | 28.69 | 2600 | .905 | 27.09 | 5200 | .820 | 24.53 | 8200 | .731 | 21.87 |
| 1200 | .955 | 28.58 | 2700 | .902 | 26.99 | 5400 | .814 | 24.35 | 8400 | .726 | 21.70 |
| 1300 | .952 | 28.47 | 2800 | .898 | 26.89 | 5600 | .808 | 24.16 | 8600 | .720 | 21.54 |
| 1400 | .948 | 28.36 | 2900 | .895 | 26.78 | 5800 | .802 | 23.98 | 8800 | .714 | 21.37 |

LAYOUT OF DUCT SYSTEMS FOR CONVEYING MATERIAL

It must first be determined how many openings and their area are to be included in the system. The total area of these openings determines the area of the fan intake and discharge, as a uniform area must be maintained in the duct system increasing as additional branches enter it. Below is a list of various pipe sizes recommended as material intakes for various types of machines.

Below is a list of velocities suggested for various materials. By multiplying the velocity by the area in square feet of the duct area at the fan intake determines the cubic feet of air required.

Allow one inch static pressure for each length of pipe equal in length to 50 diameters of the duct. Where elbows are encountered use the equivalent of 20 diameters in length of duct. If heavy material is handled an additional inch of static pressure should be added to the total static pressure to compensate for frictional losses. After figuring the cubic feet per minute and static pressure, refer to the capacity tables to determine the speed and horsepower required.

Diameter of
Main Pipe
in Inches

Table for Equalizing the Diameter of Pipes

| 1x | 1* | 2* | 3* | 4* | 5* | 6* | 7* | 8* | 9* | 10* | The dark figures with star, at top of each column give the diameters in inches of the branch-pipes. The figures at the intersection of the horizontal line with the vertical give the number of pipes, of the diameter given at the top of the column that will be equal in capacity for conveying air to one given opposite in first column. | | | | | | | | | | | | | | | | | | | | | | | |
|-----|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|--|--|--|--|--|--|
| 2x | 5.7 | 2.7 | 2.0 | | | | | | | | 11* | 12* | 13* | 14* | 15* | 16* | 17* | 18* | 19* | 20* | 22* | 24* | 26* | 28* | | | | | | | | | | |
| 3x | 16 | 5.7 | 3.6 | 1.8 | 1.6 | 6* | | | | | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | | | | | | | | | | |
| 4x | 32 | 5.7 | 3.6 | 1.8 | 1.6 | 6* | 7* | | | | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | | | | | | | | | | |
| 5x | 56 <td>9.8</td> <td>3.6</td> <td>1.8</td> <td>1.6</td> <td>6*</td> <td>7*</td> <td>8*</td> <td></td> <td></td> <td>1.7</td> <td>1.7</td> <td>1.7</td> <td>1.7</td> <td>1.7</td> <td>1.7</td> <td>1.7</td> <td>1.7</td> <td>1.7</td> <td>1.7</td> <td>1.7</td> <td>1.7</td> <td>1.7</td> <td>1.7</td> | 9.8 | 3.6 | 1.8 | 1.6 | 6* | 7* | 8* | | | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | | | | | | | | | | |
| 6x | 88 | 16 | 5.7 | 2.8 | 1.6 | 6* | 7* | 8* | 9* | | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | | | | | | | | | | |
| 7x | 129 | 23 | 8.3 | 4.1 | 2.3 | 1.5 | 2.1 | 1.4 | | | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | | | | | | | | | | |
| 8x | 180 | 32 | 12 | 5.7 | 3.2 | 2.1 | 2.8 | 1.9 | 1.3 | | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | | | | | | | | | | |
| 9x | 244 | 42 | 16 | 7.6 | 4.3 | 2.8 | 3.6 | 2.4 | 1.7 | 1.3 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | | | | | | | | | | |
| 10x | 317 | 56 | 20 | 9.9 | 5.7 | 3.6 | 4.5 | 3.1 | 2.2 | 1.7 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | | | | | | | | | | |
| 11x | 402 | 71 | 26 | 12 | 7.0 | 4.5 | 5.7 | 3.8 | 2.8 | 2.0 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | | | | | | | | | | |
| 12x | 501 | 88 | 32 | 16 | 9.0 | 5.7 | 7.9 | 5.7 | 4.2 | 3.2 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | | | | | | | | | | |
| 13x | 613 | 107 | 39 | 19 | 11 | 6.9 | 9.2 | 6.6 | 4.9 | 3.8 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | | | | | | | | | | |
| 14x | 737 | 129 | 47 | 23 | 13 | 8.3 | 11 | 7.9 | 5.7 | 4.2 | 4.7 | 4.7 | 4.7 | 4.7 | 4.7 | 4.7 | 4.7 | 4.7 | 4.7 | 4.7 | 4.7 | 4.7 | 4.7 | 4.7 | | | | | | | | | | |
| 15x | 876 | 152 | 56 | 27 | 16 | 9.9 | 13 | 9.2 | 6.6 | 4.9 | 5.2 | 5.2 | 5.2 | 5.2 | 5.2 | 5.2 | 5.2 | 5.2 | 5.2 | 5.2 | 5.2 | 5.2 | 5.2 | 5.2 | | | | | | | | | | |
| 16x | 1026 | 180 | 65 | 32 | 18 | 11 | 14 | 10 | 7.7 | 5.7 | 5.4 | 5.4 | 5.4 | 5.4 | 5.4 | 5.4 | 5.4 | 5.4 | 5.4 | 5.4 | 5.4 | 5.4 | 5.4 | 5.4 | | | | | | | | | | |
| 17x | 1197 | 208 | 76 | 37 | 21 | 13 | 16 | 12 | 8.8 | 6.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | | | | | | | | | | |
| 18x | 1375 | 239 | 88 | 43 | 24 | 16 | 18 | 14 | 9.9 | 7.4 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 | | | | | | | | | | |
| 19x | 1580 | 275 | 100 | 49 | 28 | 18 | 20 | 16 | 11 | 8.3 | 6.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | | | | | | | | | | |
| 20x | 1797 | 313 | 114 | 56 | 32 | 20 | 22 | 18 | 14 | 9.9 | 7.4 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 | | | | | | | | | | |
| 22x | 2284 | 398 | 145 | 71 | 41 | 26 | 22 | 18 | 13 | 9.3 | 7.2 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 | | | | | | | | | | |
| 24x | 2834 | 493 | 180 | 88 | 50 | 32 | 22 | 16 | 12 | 8.9 | 7.6 | 5.7 | 4.6 | 3.8 | 3.2 | 2.9 | 2.4 | 2.1 | 1.8 | 1.6 | 1.5 | 1.4 | 1.3 | 1.2 | | | | | | | | | | |
| 26x | 3474 | 605 | 219 | 108 | 62 | 39 | 27 | 19 | 14 | 11 | 8.6 | 6.9 | 5.7 | 4.7 | 4.0 | 3.4 | 2.9 | 2.5 | 2.2 | 1.9 | 1.7 | 1.5 | 1.4 | 1.3 | | | | | | | | | | |
| 28x | 4165 | 725 | 265 | 129 | 74 | 48 | 32 | 23 | 17 | 13 | 10 | 8.3 | 6.8 | 5.7 | 4.8 | 4.1 | 3.5 | 3.0 | 2.6 | 2.3 | 1.9 | 1.7 | 1.5 | 1.4 | | | | | | | | | | |

The dark figures with star, at top of each column give the diameters in inches of the branch-pipes. The figures at the intersection of the horizontal line with the vertical give the number of pipes, of the diameter given at the top of the column that will be equal in capacity for conveying air to one given opposite in first column.

Recommended Size, Pipe Intake

| | | | |
|-----------------------------|----|---|----|
| Circular Saw, 12" diam..... | 4" | Planers, Matchers, Moulders, Jointers, etc..... | 6" |
| Circular Saw, 24" diam..... | 5" | With Knives, 5"..... | 7" |
| Circular Saw, 40" diam..... | 6" | With Knives, 10"..... | 5" |
| Band Saw, 2"..... | 4" | With Knives, 15"..... | 7" |
| Band Saw, 4"..... | 6" | With Knives, 30"..... | 5" |
| Band Saw, 6"..... | 8" | Shapers..... | 6" |
| Mortiser..... | 6" | Belt Sanders, Belts, 6" wide..... | 5" |
| Single Tenoner..... | 6" | | |
| Double Tenoner..... | 7" | | |
| | | | |

Grinding Wheels

| | | | | | |
|----------------|--------|-------------|--------|-------------|----|
| 6 x 1..... | 3" | 12 x 2..... | 4" | 24 x 4..... | 5" |
| 8 x 1 1/2..... | 3 1/2" | 18 x 3..... | 4 1/2" | 30 x 5..... | 6" |

Recommended Velocities for Various Materials

| | | | |
|------------------------------------|---------------|----------------------------|---------------|
| Shavings, Saw Dust and Blocks..... | 3600 Velocity | Wheat, Corn and Grain..... | 6000 Velocity |
| Sand..... | 7500 Velocity | Wool, Cotton and Rags..... | 5000 Velocity |
| Pulverized Coal..... | 4000 Velocity | Fine Dust..... | 3200 Velocity |

NET SELLING PRICES

Applying to

No. 80 CATALOG (Tool Section)

January 3, 1955

All Prices Based on Delivery F.O.B. Lancaster, Pa.

Champion Blower & Forge Co., Lancaster, Pa., U. S. A.

(Telephone 6171)

| Page | Number and Description | |
|------|--|----------|
| 3 | No. 400 Blower | \$100.00 |
| 3 | No. 400 Blower Head only | 66.00 |
| 3 | No. 400 Bench Blower | 96.00 |
| 3 | If Tuyere Iron not wanted with above Blower, deduct \$6.00 from list price. | |
| 4 | No. 401 Forge | 100.00 |
| 4 | No. 401 Blower Head only | 62.00 |
| 4 | No. 401½ Forge | 110.00 |
| 4 | No. 401¾ Forge | 115.50 |
| 4 | Half Hood for Nos. 401, 401½, 401¾, each | 15.50 |
| 4 | Full Hood for Nos. 401, 401½, 401¾, each | 42.00 |
| 5 | No. 404 Forge | 115.00 |
| 5 | No. 405 Forge | 128.00 |
| 5 | No. 406 Forge | 125.00 |
| 5 | No. 406½ Forge | 123.25 |
| 5 | No. 407 Forge | 138.25 |
| 5 | No. 407½ Forge | 136.50 |
| 5 | No. 408 Forge | 170.00 |
| 5 | No. 409 Forge | 184.00 |
| 5 | No. 33 Forge | 85.00 |
| 5 | No. 34 Forge | 110.00 |
| 5 | Full Hood for Nos. 408, 409, 33, 34, each | 48.00 |
| 6 | No. 433 Forge | 196.00 |
| 6 | No. 433A Forge | 185.00 |
| 6 | No. 11 Forge | 138.00 |
| 6 | No. 430 Forge | 294.00 |
| 6 | No. 430½ Forge | 232.00 |
| 6 | No. 434 Forge | 120.00 |
| 6 | No. 435 Forge | 134.00 |
| 6 | No. 11¼ Forge | 80.00 |
| 6 | No. 437 Forge | 108.00 |
| 6 | No. 438 Forge | 122.00 |
| 7 | No. 40L Blower | 76.00 |
| 7 | No. 40L Blower Head only | 45.00 |
| 7 | No. 40½ Bench Blower | 72.00 |
| 7 | If Tuyere Iron not wanted with above Blowers, deduct \$2.00 from list price. | |
| 8 | No. 41 Forge | 145.00 |
| 8 | No. 41A Forge | 138.00 |
| 8 | No. 43 Forge | 100.00 |
| 8 | No. 42 Forge | 94.00 |
| 8 | No. 45 Forge | 80.00 |
| 8 | No. 46 Forge | 88.00 |

| Page | Number and Description | |
|---------------|--|----------|
| 9 | No. 48 Forge | \$ 82.50 |
| 9 | No. 48A Forge | 90.00 |
| 9 | No. 48B Forge | 94.50 |
| 9 | Half Hood for Nos. 48, 48A, 48B, each | 14.00 |
| 9 | No. 49 Forge | 90.00 |
| 9 | No. 48½ Forge | 97.00 |
| 9 | No. 44½ Forge | 116.00 |
| 9 | No. 44½A Forge | 106.00 |
| 9 | No. 47½ Forge | 158.00 |
| 9 | No. 47¾ Forge | 170.00 |
| 9 | No. 44¾ Forge | 130.00 |
| 9 | No. 48¾ Forge | 108.00 |
| 9 | No. 44¾A Forge | 121.00 |
| 5, 6, 8 and 9 | Water Tanks, extra | 15.00 |
| 10 | No. 140 Blower | 45.00 |
| 10 | No. 140 Blower Head only | 26.00 |
| 10 | No. 27 Forge | 30.00 |
| 10 | No. 60AA Hand Driven Fan | 20.00 |
| 10 | No. 60A Hand Driven Fan | 24.00 |
| 10 | No. 60B Hand Driven Fan | 29.00 |
| 10 | No. 60C Hand Driven Fan | 38.00 |
| 10 | No. 10—10 lb. Cast Anvil | 5.00 |
| 10 | No. 20—20 lb. Cast Anvil | 10.00 |
| 10 | No. 30—30 lb. Cast Anvil | 15.00 |
| 10 | No. 50—50 lb. Cast Anvil | 25.00 |
| 10 | No. 75—75 lb. Cast Anvil | 37.50 |
| 10 | No. 100—100 lb. Cast Anvil | 50.00 |
| 10 | No. 150—150 lb. Cast Anvil | 75.00 |
| 11 | No. 142 Forge | 69.25 |
| 11 | No. 143 Forge | 76.00 |
| 11 | No. 242 Forge | 64.00 |
| 11 | No. 243 Forge | 70.00 |
| 11 | No. 104 Forge | 49.00 |
| 11 | No. 147 Forge | 52.00 |
| 11 | No. 148 Forge | 58.00 |
| 11 | No. 145 Forge | 36.00 |
| 11 | No. 146 Forge | 42.00 |
| 12 | No. 143S Forge | 76.00 |
| 12 | No. 142S Forge | 69.25 |
| 12 | No. 43S Forge | 106.00 |
| 12 | No. 42S Forge | 94.00 |
| 12 | No. 147S Forge | 36.25 |
| 12 | No. 148S Forge | 40.75 |
| 12 | No. 145S Forge | 28.50 |
| 12 | No. 146S Forge | 33.00 |
| 12 | 145S Blower Head only | 20.00 |
| 12 | No. 135S Forge | 28.50 |
| 12 | No. 136S Forge | 33.00 |

| Page | Number and Description | |
|-------|------------------------|---|
| 12 | No. 4142S | Forge .....\$124.00 |
| 12 | No. 4143S | Forge 132.00 |
| 12 | No. 4147S | Forge 78.00 |
| 12 | No. 4148S | Forge 84.00 |
| 12 | No. 4145S | Forge 59.50 |
| 12 | No. 4146S | Forge 69.25 |
| 13 | No. 1145S | Forge 80.00 |
| 13 | No. 1146S | Forge 84.00 |
| 13 | No. 1147S | Forge 86.00 |
| 13 | No. 1148S | Forge 92.00 |
| 13 | No. 1143S | Forge 136.00 |
| 13 | No. 1145SE | Electric Forge, 11V AC 108.00 |
| 13 | No. 1146SE | Electric Forge " " 112.00 |
| 13 | No. 1147SE | Electric Forge " " 121.00 |
| 13 | No. 1148SE | Electric Forge " " 127.00 |
| 13 | No. 1143SE | Electric Forge " " 172.00 |
| 14 | No. 20 | Constant Speed Electric Blower 93.00 |
| 14 | No. 21 | Constant Speed Electric Blower 71.00 |
| 14 | No. 121 | Constant Speed Electric Blower 84.00 |
| 14 | No. 221 | Constant Speed Electric Blower 187.00 |
| 14 | No. 321 | Constant Speed Electric Blower 209.00 |
| 14 | No. 2 | Constant Speed Electric Blower 110.00 |
| 14 | No. 3 | Constant Speed Electric Blower 196.00 |
| 15 | No. 50 | Variable Speed Electric Blower, 110 volt 93.00 |
| 15 | No. 50 | Variable Speed Electric Blower, 220 volt 104.00 |
| 15 | No. 51 | Variable Speed Electric Blower, 110 volt 110.00 |
| 15 | No. 51 | Variable Speed Electric Blower, 220 volt 121.00 |
| 16 | No. 400 | "Whirlwind" Tuyere Iron 26.50 |
| 16 | No. 4 | Heavy Nest Tuyere Iron 40.00 |
| 16 | No. 400B | Tuyere Iron 22.00 |
| 16 | No. 40 | Patent Adjustable Nozzle Tuyere Iron 14.25 |
| 17 | No. 440 | Electric Forge, 110v or 220v 231.00 |
| 17 | No. 449 | Electric Forge, 110v or 220v 267.00 |
| 17 | No. 453 | Electric Forge, 110v or 220v 192.00 |
| 17 | No. 455 | Electric Forge, 110v or 220v 200.00 |
| 17 | | Full Hood, extra 42.00 |
| 17 | No. 446 | Electric Forge, 110v or 220v 430.00 |
| 17 | No. 447 | Electric Forge, 110v or 220v 484.00 |
| 17 | | Water Tanks for Nos. 446 and 447 Forges, each 96.00 |
| 17 | No. 459 | Electric Forge, 110v or 220v 170.00 |
| 18 | No. 442 | Electric Forge, 110v or 220v 432.00 |
| 18 | No. 442B | Electric Forge, 110v or 220v 455.00 |
| 18 | No. 442C | Electric Forge, 110v or 220v 550.00 |
| 18 | No. 442D | Electric Forge, 110v or 220v 356.00 |
| 18 | No. 441 | Electric Forge, 110v or 220v 231.00 |
| 18 | No. 441½ | Electric Forge, 110v or 220v 214.00 |
| 18 | No. 443 | Electric Forge, 110v or 220v 194.00 |
| 17-18 | | Water Tanks, extra 15.00 |
| 19 | No. 12 | Forge 165.00 |
| 19 | No. 12½ | Forge 300.00 |
| 19 | No. 13½ | Forge 400.00 |
| 19 | No. 11½ | Forge 115.00 |
| 19 | | Half Hood, extra 20.00 |
| 19 | No. 35 | Forge 248.00 |
| 19 | No. 36 | Forge 290.00 |
| 19 | No. 36½ | Forge 440.00 |
| 19 | | Water Tanks (35-36-36½) extra 96.00 |
| 19 | No. 35 | Telescopic Canopy Hood 125.00 |

| Page | Number and Description | |
|------|------------------------|---|
| 19 | No. 36 | Telescopic Canopy Hood .....\$145.00 |
| 19 | No. 36½ | Telescopic Canopy Hood 160.00 |
| 19 | No. 38 | Forge 450.00 |
| 19 | No. 39 | Forge 700.00 |
| 19 | No. 39½ | Forge 770.00 |
| 19 | | Water Tanks (38-39-39½) extra 15.00 |
| 19 | | Down Draft Hood, extra 88.00 |
| 20 | No. 202DD | Down Draft Forge 243.00 |
| 20 | No. 202DDD | Down Draft Forge 385.00 |
| 21 | | Champion Forge Shop 269.50 |
| 22 | | Champion Broiler Grill 44.00 |
| 23 | No. 100 | 3-jaw ½" Drill Chuck 10.00 |
| 23 | | ½" or 41/64" Arbor 2.00 |
| 23 | No. 1, No. 2, No. 3, | Morse Taper Arbor 3.00 |
| 23 | No. 4 | Morse Taper Arbor 4.40 |
| | | Additional cost of Morse Taper Arbor on any Post Drill 9.00 |
| 23 | No. 103 | Post Drill 24.00 |
| 23 | No. 1000 | Post Drill with ½" three jaw Chuck 25.00 |
| 23 | No. 104 | Bench Drill 29.00 |
| 23 | No. 104C | Bench Drill 39.00 |
| 23 | No. 110 | Electric Post Drill 54.50 |
| 23 | No. 108 | Post Drill 17.50 |
| 23 | No. 98 | Post Drill 40.00 |
| 23 | No. 101 | Post Drill 30.00 |
| 24 | No. 93½ | Post Drill 46.00 |
| 24 | No. 90 | Post Drill 42.00 |
| 24 | No. 95 | Post Drill 55.00 |
| 24 | No. 96 | Post Drill 62.00 |
| 24 | No. 4 | Post Drill 80.00 |
| 25 | No. 97 | Post Drill 81.00 |
| 25 | No. 297 | Post Drill 204.00 |
| 25 | No. 297P | Post Drill 216.00 |
| 25 | No. 397 | Upright Drill 275.00 |
| 25 | No. 397P | Upright Drill 287.00 |
| 26 | No. 200 | Post Drill 109.00 |
| 26 | No. 200½ | Post Drill 130.00 |
| 26 | No. 200½P | Post Drill 142.00 |
| 26 | No. 201 | Post Drill 190.00 |
| 26 | No. 201P | Post Drill 202.00 |
| 26 | No. 203 | Post Drill 240.00 |
| 26 | No. 203P | Post Drill 254.00 |
| 26 | No. 203½ | Upright Drill 341.00 |
| 26 | No. 203½P | Upright Drill 353.00 |
| 26 | No. 203E | Electric Driven Post Drill 440.00 |
| 26 | No. 203½E | Electric Driven Upright Drill 530.00 |
| 27 | No. 2400 | Electric Driven Drill, 110 or 220 volt, 60 cycles, single phase..980.00 |
| 27 | No. 2400 | Electric Driven Drill, 220 or 440 volts, 2 or 3 phase 940.00 |
| 27 | No. 2400 | Electric Driven Drill, less Motor and Switch 800.00 |
| 28 | No. 2200 | Back Geared Power Drill less Motor 740.00 |
| 28 | No. 2200 | Back Geared Power Drill, 110v 60 cycles, single phase 920.00 |
| 28 | No. 2200 | Back Geared Power Drill, 220v 60 cycles, 3 phase 880.00 |
| 28 | No. 2200 | Drill less Guards, deduct 60.00 |
| 29 | | 24-inch Back Geared Power Drill 760.00 |

| Page | Number and Description | |
|-------|--|----------|
| 29 | 24-inch Back Geared Power Drill | |
| | V Belt Electric Drive less Motor | \$765.00 |
| 29 | 24-inch Electric Driven Drill, 110 | |
| | or 220 volts, 60 cycles, single phase | 939.00 |
| 29 | 24-inch Electric Driven Drill, 220 | |
| | or 440 volts, 60 cycles, 2 or 3 phase | 909.00 |
| 30 | 21-inch Back Geared Power Drills | 652.00 |
| 30 | 21-inch Back Geared Power Drill, | |
| | V Belt Electric Drive less Motor | 656.00 |
| 30 | 21-inch Electric Driven Drill 110 | |
| | or 220 volts, 60 cycles, single phase | 830.00 |
| 30 | 21-inch Electric Driven Drill 220 | |
| | or 440 volts, 60 cycles, 2 or 3 phase | 800.00 |
| 29-30 | Extra for Positive Gear Feed | 100.00 |
| 29-30 | Extra for Reversing Switch | 14.00 |
| 29-30 | Extra for Geared Electric Motor | |
| | Drive instead of V Belt Drive | 24.00 |
| 29-30 | Extra cost for mounting and wiring | |
| | Customer's Motor and Switch | 28.50 |
| 29-30 | Extra for Flat Belts | 19.50 |
| 29-30 | Extra for Large Cone Pulley | |
| | Guard | 48.00 |
| 29-30 | Extra for Feed Pulley Guard | 24.00 |
| 31 | No. 2100 Back Geared Upright | |
| | Electric Drill | 1200.00 |
| 27-31 | Extra for Positive Gear Feed | 100.00 |
| 27-31 | Extra for Reversing Switch | 14.00 |
| 32 | No. 2000 High Speed Drill 1 HP Motor | 425.00 |
| 32 | No. 2000 High Speed Drill ½ HP Motor | 390.00 |
| 32 | No. 2000 High Speed Drill less Motor | 330.00 |
| 32 | Extra for Light for # 2000 Drill .. | 14.00 |
| 33 | No. 16F Floor Drill, 110V, 60C, Single | |
| | phase AC w/light | 160.00 |
| 33 | No. 16F Floor Drill, dual voltage, | |
| | 110/220V Motor w/light | 182.00 |
| 33 | No. 16F Floor Drill less Motor w/light . | 120.00 |
| 33 | No. 16B Bench Drill, 110V, 60C, single | |
| | phase AC w/light | 148.00 |
| 33 | No. 16B Bench Drill, dual voltage, | |
| | 110/220V Motor w/light..... | 170.00 |
| 33 | No. 16B Bench Drill less Motor | |
| | w/light | 108.00 |
| | If Light not wanted Deduct | 10.00 |
| 34 | No. 1600 Floor Drill, 110V, 60C, SP | |
| | Motor | 145.00 |
| 34 | No. 1600 Floor Drill less Motor | 105.00 |
| 34 | No. 1600 Floor Drill dual voltage, | |
| | 110/220V Motor | 167.00 |
| 34 | No. 1600B Bench Drill 110V, 60C, SP | |
| | AC Motor | 133.00 |
| 34 | No. 1600B Bench Drill less Motor | 93.00 |
| 34 | No. 1600B Bench Drill dual voltage | |
| | 110/220V Motor | 155.00 |
| 34 | No. 1500 Floor Drill, 110V, 60C, SP | |
| | AC Motor | 142.00 |
| 34 | No. 1500 Floor Drill, less Motor | 102.00 |
| 34 | No. 1500 Floor Drill dual voltage | |
| | 110/220V Motor | 164.00 |
| 34 | No. 1500B Bench Drill, 110V, 60C, SP | |
| | AC Motor | 130.00 |
| 34 | No. 1500B Bench Drill, less Motor | 90.00 |
| 34 | No. 1500B, Bench Drill, dual voltage | |
| | AC Motor | 152.00 |
| 33-34 | Other voltages, extra | 20.00 |

| Page | Number and Description | |
|------|---|----------|
| 35 | No. 1400 Bench Drill, 110V, 60C, SP | |
| | AC Motor | \$ 90.00 |
| 35 | No. 1400 Bench Drill, less Motor | 68.00 |
| 35 | Extras for Jacobs Chuck | 9.00 |
| 35 | Extra for 220V Motor | 18.00 |
| 35 | No. 1100 Bench Drill, 110V, AC, SP | |
| | 60C | 65.00 |
| 35 | No. 1100 Bench Drill, less Motor | 38.00 |
| 35 | Extra for Jacobs Chuck | 10.00 |
| 35 | Extra for 220V Motor | 18.00 |
| 35 | No. 48E Motor Driven Bench Drill, | |
| | 110V, 60C, SP, AC | 82.50 |
| 35 | No. 48E Motor Driven Bench Drill | |
| | less Motor | 59.00 |
| 35 | Other voltages, extra | 18.00 |
| 36 | No. 4 Arbor Press | 434.00 |
| 36 | No. 3 Arbor Press | 72.00 |
| 36 | No. 1 Steel Shear | 160.00 |
| 36 | Extra knives for same, per pair .. | 30.00 |
| 36 | No. 2 Steel Shear | 180.00 |
| 36 | Extra knives for same, per pair .. | 40.00 |
| 36 | No. 10 Bench Shear | 35.00 |
| 36 | Extra knives for same, per pair .. | 12.00 |
| 36 | No. 1 Steel Punch | 120.00 |
| 36 | Extra Punches and Dies, per set .. | 12.00 |
| 36 | No. 2 Steel Punch | 240.00 |
| 36 | Extra Punches and Dies, per set .. | 16.00 |
| 37 | No. 2 Power Hack Saw | 182.00 |
| 37 | No. 2 Electric Driven Hack Saw | 242.00 |
| 37 | No. 2 Electric Hack Saw less Motor | 182.00 |
| 37 | Extra for Electric Hack Saw | |
| | Guard | 20.00 |
| 37 | No. 1 Power Hack Saw | 98.00 |
| 37 | No. 1 Electric Driven Hack Saw | 154.00 |
| 37 | No. 1 Electric Driven Hack Saw | |
| | less Motor | 110.00 |
| 37 | No. 0 Power Hack Saw | 44.00 |
| 38 | No. 3 Electric Driven Wet Cut Hack | |
| | Saw | 402.00 |
| 38 | No. 3 Electric Driven Wet Cut Hack | |
| | Saw less Motor | 330.00 |
| 38 | No. 3 Wet Cut Power Hack Saw | 330.00 |
| 38 | No. 3 Electric Driven Dry Cut Hack | |
| | Saw | 300.00 |
| 38 | No. 3 Electric Driven Dry Cut Hack | |
| | Saw less Motor | 250.00 |
| 38 | No. 3 Dry Cut Power Hack Saw | 250.00 |
| 39 | No. 0 Power Hammer | 400.00 |
| 39 | No. 0 Elec. Hammer less Motor & Switch | 450.00 |
| 39 | No. 0 Elec. Hammer-single phase | 555.00 |
| 39 | No. 0 Elec. Hammer-2 or 3 phase | 539.00 |
| 39 | No. 1 Power Hammer | 468.00 |
| 39 | No. 1 Elec. Hammer less Motor & Switch | 520.00 |
| 39 | No. 1 Elec. Hammer-single phase | 750.00 |
| 39 | No. 1 Elec. Hammer-2 or 3 phase | 660.00 |
| 39 | No. 2 Power Hammer | 1540.00 |
| 39 | No. 2 Elec. Hammer less Motor & | |
| | Switch | 1560.00 |
| 39 | No. 2 Elec. Hammer-single phase | 2220.00 |
| 39 | No. 2 Elec. Hammer-2 or 3 phase | 1800.00 |
| 40 | No. 1 Column Grinder | 110.00 |
| 40 | Extra for Tight & Loose Pulleys | 7.50 |

| Page | Number and Description |
|------|--|
| 40 | No. 1 Column Grinder Guards\$ 28.00 |
| 40 | No. 1 Disc Grinder Attachment 42.00 |
| 40 | No. 11 Column Grinder with Guards .. 86.00 |
| 40 | No. 11 Column Grinder less Guards .. 84.00 |
| 40 | No. 2 Bench Grinder 52.00 |
| 40 | No. 2A Bench Grinder 57.00 |
| 40 | No. 2 Bench Grinder Guards 18.00 |
| 40 | No. 0 Bench Grinder 30.00 |
| 40 | No. 0A Bench Grinder 36.00 |
| 40 | No. 0 Bench Grinder Guards 14.00 |
| 40 | No. 4 Bench Grinder 7.50 |
| 40 | No. 4A Bench Grinder 8.50 |
| 40 | No. 3 Bench Grinder 16.00 |
| 40 | No. 3A Bench Grinder 18.00 |
| 40 | No. 3 Bench Grinder Guards 9.00 |
| 41 | No. 3 Extra Heavy Swivel Vise 9.50 |
| 41 | No. 3½ Extra Heavy Swivel Vise 12.00 |
| 41 | No. 4 Extra Heavy Swivel Vise 16.50 |
| 41 | No. 5 Extra Heavy Swivel Vise 38.00 |
| 41 | No. 6 Extra Heavy Swivel Vise 60.00 |
| 41 | No. 000 Saw Mandrel 5.25 |
| 41 | No. 00 Saw Mandrel 9.75 |
| 41 | No. 0 Saw Mandrel 11.00 |
| 41 | No. 1 Saw Mandrel 14.50 |
| 41 | No. 2 Saw Mandrel 17.50 |
| 41 | No. 3 Saw Mandrel 23.00 |
| 41 | No. 4 Saw Mandrel 34.00 |
| 41 | No. 5 Saw Mandrel 39.00 |
| 41 | No. 6 Saw Mandrel 41.00 |
| 41 | No. 6½ Saw Mandrel 44.00 |
| 41 | No. 7 Saw Mandrel 46.00 |
| 41 | No. 8 Saw Mandrel 75.00 |

| Page | Number and Description |
|------|---|
| 41 | No. 9 Saw Mandrel .....\$115.00 |
| 41 | No. 10 Saw Mandrel 162.00 |
| 41 | No. 11 Saw Mandrel 192.00 |
| 41 | No. 000 Ball Bearing Saw Mandrel .. 8.10 |
| 41 | No. 00 Ball Bearing Saw Mandrel NN 14.00 |
| 41 | No. 0 Ball Bearing Saw Mandrel 23.00 |
| 41 | No. 1 Ball Bearing Saw Mandrel 29.00 |
| 41 | No. 2 Ball Bearing Saw Mandrel 33.00 |
| 41 | No. 3 Ball Bearing Saw Mandrel 38.00 |
| 41 | No. 4 Ball Bearing Saw Mandrel 44.00 |
| 41 | No. 5 Ball Bearing Saw Mandrel 49.00 |
| 41 | No. 6 Ball Bearing Saw Mandrel 52.00 |
| 41 | No. 6½ Ball Bearing Saw Mandrel .. 55.00 |
| 41 | No. 7 Ball Bearing Saw Mandrel 58.00 |
| 41 | No. 8 Ball Bearing Saw Mandrel 79.00 |
| 41 | No. 9 Ball Bearing Saw Mandrel 96.00 |
| 41 | No. 10 Ball Bearing Saw Mandrel 115.00 |
| 41 | No. 11 Ball Bearing Saw Mandrel 145.00 |
| 41 | Saw Mandrel threaded both Ends with Pulley in Center Add 15% |
| 41 | No. 5 Drilling Vise 30.00 |
| 42 | No. 3 Angle Bender 450.00 |
| 42 | No. 4 American Shrinker 165.00 |
| 42 | No. 1 Eureka Tire Bender 120.00 |
| 42 | No. 2 Eureka Tire Bender 160.00 |
| 43 | Easy Screw Plate List |
| 44 | Die and Stock Sets List |
| 44 | Adjustable Spring Dies List |
| 44 | Stocks for above Dies List |
| 44 | Tap Wrenches List |
| 44 | Pump Makers' Stocks and Dies List |

NET SELLING PRICES

Applying to

NO. 80-B CATALOG (Fan & Blower Section)

January 3, 1955

All Prices Based on Delivery F.O.B. Lancaster, Pa.

Champion Blower & Forge Co., Lancaster, Pa., U. S. A.

(Telephone 6171)

TYPE CE FORWARD CURVE FANS, PAGE 45

| No. | H. P. | R. P. M. | Single Phase | Three Phase | Arr. #4 (Less Motor) |
|-------|-------|----------|--------------|-------------|----------------------|
| 00 | 1/50 | 3000 | \$ 48.00* | \$..... | \$30.00 |
| 0 | 1/20 | 1725 | 64.00* | \$..... | 34.00 |
| 1 | 1/20 | 1140 | 86.00* | \$..... | 48.00 |
| 1 | 1/6 | 1725 | 72.00* | \$..... | 48.00 |
| 1 1/4 | 1/6 | 1140 | 106.00* | \$..... | 60.00 |
| 1 1/4 | 1/3 | 1725 | 90.00* | 115.00 | 60.00 |
| 1 1/2 | 1/3 | 1140 | 180.00* | 180.00 | 80.00 |
| 1 1/2 | 1 | 1725 | 216.00 | 198.00 | 80.00 |
| 1 3/4 | 1/2 | 1140 | 200.00 | 200.00 | 100.00 |
| 2 | 1/2 | 690 | ..... | 320.00 | 130.00 |
| 2 | 1/2 | 860 | 400.00 | 280.00 | 130.00 |
| 2 | 1 | 1140 | 379.00 | 264.00 | 130.00 |
| 2 1/2 | 3/4 | 690 | ..... | 395.00 | 170.00 |
| 2 1/2 | 1 1/2 | 860 | 579.00 | 402.00 | 170.00 |
| 3 | 3 | 690 | ..... | 590.00 | 210.00 |

TYPE C FORWARD CURVE FANS PAGE 45

| No. | Arrangement No. 2 |
|-------|-------------------|
| 00 | \$ 36.00 |
| 0 | 42.00 |
| 1 | 52.00 |
| 1 1/4 | 68.00 |
| 1 1/4 | 80.00 |
| 1 1/2 | 120.00 |
| 2 | 150.00 |
| 2 1/2 | 200.00 |
| 3 | 250.00 |

FORCED DRAFT BLOWERS PAGE 46

| | |
|----|---------|
| 30 | \$27.00 |
| 31 | \$32.00 |

TYPE S FORWARD CURVE FANS, PAGE 47 SINGLE WIDTH, SINGLE INLET

| No. | Arr. 2 | Arr. 3 | Arr. 4 | Wheel | Arr. 1-5 or 6 | Arr. 7 or 8 |
|-------|--------|----------|--------|----------|---------------|-------------|
| 1 | 64.00 | ..... | 64.00 | \$ 11.50 | ..... | ..... |
| 1 1/4 | 74.00 | ..... | 78.00 | 13.80 | ..... | ..... |
| 1 1/2 | 85.00 | ..... | 90.00 | 21.00 | ..... | ..... |
| 1 3/4 | 117.00 | ..... | 121.00 | 31.00 | ..... | ..... |
| 2 | 129.00 | ..... | 144.00 | 37.00 | 161.00 | 249.00 |
| 2 1/2 | 160.00 | ..... | 177.00 | 55.00 | 213.00 | 325.00 |
| 3 | 208.00 | ..... | 233.00 | 65.00 | 271.00 | 416.00 |
| 3 1/2 | 255.00 | ..... | 287.00 | 80.00 | 340.00 | 515.00 |
| 4 | 303.00 | 303.00 | 342.00 | 95.00 | 406.00 | 613.00 |
| 4 1/2 | 350.00 | 350.00 | 378.00 | 119.00 | 470.00 | 712.00 |
| 5 | 415.00 | 415.00 | 444.00 | 138.00 | 528.00 | 796.00 |
| 5 1/2 | 460.00 | 460.00 | 499.00 | 154.00 | 571.00 | 865.00 |
| 6 | 515.00 | 515.00 | 548.00 | 172.00 | 644.00 | 976.00 |
| 6 1/2 | ..... | 570.00 | ..... | 189.00 | 736.00 | 1,107.00 |
| 7 | ..... | 610.00 | ..... | 205.00 | 775.00 | 1,213.00 |
| 8 | ..... | 700.00 | ..... | 234.00 | 891.00 | 1,361.00 |
| 9 | ..... | 810.00 | ..... | 272.00 | 958.00 | 1,553.00 |
| 10 | ..... | 1,016.00 | ..... | 339.00 | 1,094.00 | 1,819.00 |

TYPE S FORWARD CURVES FANS, PAGE 47 DOUBLE WIDTH, DOUBLE INLET

| No. | Arr. 3 | Arr. 7 | Wheels |
|-------|-----------|-----------|----------|
| 2 | \$ 214.00 | \$ 342.00 | \$ 74.00 |
| 2 1/2 | 259.00 | 428.00 | 110.00 |
| 3 | 332.00 | 535.00 | 130.00 |
| 3 1/2 | 407.00 | 663.00 | 160.00 |
| 4 | 484.00 | 835.00 | 190.00 |
| 4 1/2 | 570.00 | 910.00 | 238.00 |
| 5 | 663.00 | 1,043.00 | 276.00 |
| 5 1/2 | 736.00 | 1,124.00 | 308.00 |
| 6 | 823.00 | 1,273.00 | 344.00 |
| 6 1/2 | 912.00 | 1,475.00 | 378.00 |
| 7 | 985.00 | 1,578.00 | 410.00 |
| 8 | 1,119.00 | 1,766.00 | 468.00 |
| 9 | 1,295.00 | 2,033.00 | 544.00 |
| 10 | 1,626.00 | 2,429.00 | 678.00 |

TYPE SE ELECTRIC DRIVEN FORWARD CURVE FANS, PAGE 49

| No. | H. P. | R. P. M. | A. C. Single Phase | Poly-Phase |
|-------|-------|----------|--------------------|------------|
| 1 | 1/6 | 1140 | \$108.00* | ..... |
| 1 | 1/2 | 1725 | 99.00 | ..... |
| 1 1/4 | 1/2 | 1140 | 130.00 | ..... |
| 1 1/4 | 1 | 1725 | 110.00 | 140.00 |
| 1 1/2 | 1/6 | 860 | 196.00* | 196.00* |
| 1 1/2 | 1/3 | 1140 | 186.00* | 186.00* |
| 1 1/2 | 1 | 1725 | 217.00 | 210.00 |
| 1 3/4 | 1/3 | 860 | 256.00* | 256.00* |
| 1 3/4 | 1/2 | 1140 | 235.00 | 235.00 |
| 2 | 1/2 | 690 | ..... | 340.00 |
| 2 | 1/2 | 860 | 410.00 | 309.00 |
| 2 | 1 | 1140 | 397.00 | 288.00 |
| 2 1/2 | 3/4 | 690 | ..... | 421.00 |
| 2 1/2 | 1 1/2 | 860 | 680.00 | 432.00 |
| 3 | 3 | 690 | ..... | 820.00 |
| 3 | 7 1/2 | 860 | ..... | 690.00 |
| 3 1/2 | 7 1/2 | 690 | ..... | 880.00 |
| 3 1/2 | 10 | 860 | ..... | 860.00 |
| 4 | 10 | 690 | ..... | 1,070.00 |

TYPE F FORWARD CURVE FANS, PAGE 50

| No. | SINGLE WIDTH, SINGLE INLET | DOUBLE WIDTH, DOUBLE INLET |
|-------|----------------------------|----------------------------|
| 1 1/4 | \$ 58.00 | \$118.00 |
| 2 | 67.00 | 134.00 |
| 2 1/2 | 87.00 | 174.00 |
| 3 | 123.00 | 246.00 |
| 3 1/2 | 170.00 | 300.00 |
| 4 | 207.00 | 360.00 |
| 4 1/2 | 244.00 | 420.00 |
| 5 | 302.00 | 540.00 |

TYPE FX FORWARD CURVE CASE & WHEEL, PAGE 50

| No. | SINGLE WIDTH, SINGLE INLET | DOUBLE WIDTH, DOUBLE INLET |
|-------|----------------------------|----------------------------|
| 0 | \$21.00 | \$40.00 |
| 1 | 28.00 | 54.00 |
| 1 1/4 | 37.00 | 72.00 |
| 1 1/2 | 43.00 | 82.00 |
| 1 3/4 | 52.00 | 100.00 |
| 2 | 59.00 | 112.00 |
| 2 1/2 | 75.00 | 140.00 |
| 3 | 105.00 | 200.00 |

* 110 V single phase and 220 V three phase regularly furnished —other voltages special.

TYPE BC BACKWARD CURVE FANS, PAGE 55

SINGLE WIDTH, SINGLE INLET

| No. | Arr. 2 | Arr. 3 | Arr. 4 | Arr. 1-5 or 6 | Arr. 7 or 8 | Wheels | Arr. 3 | Arr. 7 | Wheels |
|-----|----------|----------|----------|------------------|----------------|----------|-----------|-----------|----------|
| 2 | \$129.00 | ..... | \$144.00 | \$170.00 | \$255.00 | \$ 46.00 | \$ 214.00 | \$ 342.00 | \$ 92.00 |
| 2½ | 160.00 | ..... | 172.00 | 213.00 | 325.00 | 66.00 | 270.00 | 428.00 | 132.00 |
| 3 | 208.00 | ..... | 233.00 | 271.00 | 416.00 | 79.00 | 332.00 | 535.00 | 158.00 |
| 3½ | 255.00 | ..... | 287.00 | 340.00 | 515.00 | 96.00 | 407.00 | 663.00 | 192.00 |
| 4 | 303.00 | 303.00 | 342.00 | 406.00 | 613.00 | 111.00 | 484.00 | 792.00 | 222.00 |
| 4½ | 350.00 | 350.00 | 378.00 | 470.00 | 712.00 | 131.00 | 570.00 | 912.00 | 262.00 |
| 5 | 415.00 | 415.00 | 444.00 | 528.00 | 796.00 | 148.00 | 663.00 | 1,043.00 | 296.00 |
| 5½ | ..... | 460.00 | 499.00 | 571.00 | 865.00 | 167.00 | 736.00 | 1,124.00 | 334.00 |
| 6 | ..... | 515.00 | 545.00 | 644.00 | 976.00 | 185.00 | 823.00 | 1,273.00 | 370.00 |
| 6½ | ..... | 570.00 | ..... | 736.00 | 1,107.00 | 210.00 | 912.00 | 1,477.00 | 410.00 |
| 7 | ..... | 610.00 | ..... | 774.00 | 1,213.00 | 231.00 | 985.00 | 1,578.00 | 462.00 |
| 8 | ..... | 700.00 | ..... | 891.00 | 1,361.00 | 305.00 | 1,119.00 | 1,766.00 | 610.00 |
| 9 | ..... | 810.00 | ..... | 958.00 | 1,558.00 | 347.00 | 1,295.00 | 2,033.00 | 694.00 |
| 10 | ..... | 1,016.00 | ..... | 1,094.00 | 1,819.00 | 416.00 | 1,626.00 | 2,429.00 | 832.00 |

DOUBLE WIDTH, DOUBLE INLET

TYPE BCE ELECTRIC DRIVEN BACKWARD CURVE FANS, PAGE 56

| No. | H. P. | R. P. M. | A. C. Single Phase | Poly- Phase |
|-----|-------|----------|-----------------------|----------------|
| 2 | 1/2 | 1725 | \$232.00 | \$224.00 |
| 2 | 1/6 | 1140 | 200.00* | 260.00* |
| 2½ | 1 | 1725 | 320.00 | 300.00 |
| 2½ | 1/2 | 1140 | 290.00 | 290.00 |
| 2½ | 1/6 | 860 | 280.00* | 280.00* |
| 3 | 3 | 1725 | 500.00 | 425.00 |
| 3 | 1 | 1140 | 419.00 | 389.00 |
| 3 | 1/2 | 860 | 510.00 | 460.00 |
| 3½ | 3 | 1140 | 842.00 | 510.00 |
| 3½ | 1 | 860 | 700.00 | 500.00 |
| 3½ | 1/2 | 690 | ..... | 505.00 |
| 4 | 2 | 860 | 950.00 | 620.00 |
| 4 | 1 | 690 | ..... | 620.00 |

TYPE D NON-OVERLOADING VENTILATING SET, PAGE 59

| No. | H. P. | A. C. Single Phase | Poly- Phase | Adjustable Drive | Weather Proof Cover | Less Motor |
|-----|-------|-----------------------|----------------|---------------------|---------------------------|---------------|
| 1¾ | 1/4 | \$122.00* | \$141.00* | \$ 6.60 | \$11.00 | \$99.00 |
| 2 | 1/4 | 146.00* | 164.00* | 6.60 | 11.00 | 120.00 |
| 2 | 1/3 | 149.00* | 168.00* | 6.60 | 11.00 | 120.00 |
| 2½ | 1/3 | 156.00* | 199.00* | 7.70 | 12.10 | 145.00 |
| 2½ | 1/2 | 200.00 | 200.00 | 7.70 | 12.10 | 145.00 |
| 3 | 1/2 | 324.00 | 324.00 | 8.80 | 13.20 | 256.00 |
| 3 | 3/4 | 345.00 | 348.00 | 8.80 | 13.20 | 256.00 |
| 3½ | 1/2 | 413.00 | 413.00 | 11.00 | 14.30 | 342.00 |
| 3½ | 1 | 455.00 | 430.00 | 11.00 | 14.30 | 342.00 |
| 4 | 1/2 | 455.00 | 455.00 | 12.65 | 15.40 | 400.00 |
| 4 | 1 | 500.00 | 493.00 | 12.65 | 15.40 | 400.00 |
| 4 | 1 1/2 | 531.00 | 510.00 | 12.65 | 15.40 | 400.00 |
| 4½ | 3/4 | 537.00 | 540.00 | 17.60 | 16.50 | 470.00 |
| 4½ | 1 | 570.00 | 562.00 | 17.60 | 16.50 | 470.00 |
| 4½ | 1 1/2 | 600.00 | 580.00 | 17.60 | 16.50 | 470.00 |
| 5 | 1 | 650.00 | 645.00 | 25.30 | 19.80 | 550.00 |
| 5 | 1 1/2 | 680.00 | 660.00 | 25.30 | 19.80 | 550.00 |
| 5 | 2 | 730.00 | 676.00 | 25.30 | 19.80 | 550.00 |

TYPE A and B UNIVERSAL FANS, PAGE 61

| No. | Type A | Type B | Wheel |
|-----|----------|----------|---------|
| ½ | \$ 58.00 | \$ 53.00 | \$15.50 |
| 1 | 88.00 | 74.00 | 20.00 |
| 2 | 112.00 | 94.00 | 29.00 |
| 3 | 118.00 | 110.00 | 39.00 |
| 4 | 146.00 | 125.00 | 49.00 |
| 5 | 196.00 | 150.00 | 60.00 |
| 6 | 224.00 | 200.00 | 64.00 |
| 7 | 314.00 | 300.00 | 84.00 |
| 8 | 445.00 | 420.00 | 96.00 |

TYPE BE ELECTRIC DRIVEN UNIVERSAL FANS, PAGE 62

| No. | R. P. M. | H. P. | Single Phase | Three Phase | Less Motor |
|-----|----------|-------|-----------------|----------------|---------------|
| 1/2 | 1725 | 1/6 | \$ 85.00* | \$106.00* | \$ 53.00 |
| 1/2 | 3450 | 1/4 | 110.00* | 112.00* | 53.00 |
| 1 | 1725 | 1/4 | 106.00* | 129.00* | 76.00 |
| 1 | 3450 | 1/2 | 140.00 | 140.00 | 76.00 |
| 2 | 1725 | 1/3 | 132.00* | 159.00* | 102.00 |
| 2 | 3450 | 2 | 216.00 | 250.00 | 102.00 |
| 3 | 1140 | 1/4 | 184.00* | 189.00* | 114.00 |
| 3 | 1725 | 1/2 | 180.00 | 184.00 | 114.00 |
| 3 | 3450 | 5 | 449.00 | 300.00 | 114.00 |
| 4 | 1140 | 1/2 | 240.00 | 240.00 | 136.00 |
| 4 | 1725 | 1 | 260.00 | 260.00 | 136.00 |
| 4 | 3450 | 7 1/2 | 740.00 | 364.00 | 136.00 |
| 5 | 860 | 1/2 | 430.00 | 310.00 | 168.00 |
| 5 | 1140 | 3/4 | 360.00 | 295.00 | 168.00 |
| 5 | 1725 | 2 | 380.00 | 330.00 | 168.00 |
| 6 | 860 | 3/4 | 530.00 | 385.00 | 212.00 |
| 6 | 1140 | 1 | 470.00 | 357.00 | 212.00 |
| 6 | 1725 | 5 | 635.00 | 420.00 | 212.00 |
| 7 | 860 | 2 | 890.00 | 581.00 | 325.00 |
| 7 | 1150 | 5 | 920.00 | 590.00 | 325.00 |
| 7 | 1725 | 10 | 1,105.00 | 665.00 | 325.00 |
| 8 | 860 | 5 | 1,450.00 | 805.00 | 455.00 |
| 8 | 1140 | 7 1/2 | 1,300.00 | 800.00 | 455.00 |

STEEL PRESSURE BLOWERS, PAGE 65

| No. | Pulley Drive | Wheel |
|-----|--------------|----------|
| 1/2 | \$ 48.00 | \$ 13.00 |
| 1 | 64.00 | 19.00 |
| 2 | 99.00 | 26.00 |
| 3 | 130.00 | 37.00 |
| 4 | 157.00 | 47.00 |
| 5 | 196.00 | 57.00 |
| 6 | 230.00 | 70.00 |
| 7 | 317.00 | 76.00 |
| 8 | 385.00 | 102.00 |
| 9 | 513.00 | 117.00 |
| 10 | 815.00 | 140.00 |

* See page 5

ELECTRIC DRIVEN STEEL PRESSURE BLOWERS, PAGE 65

| No. | H. P. | R. P. M. | 110V Single Phase | Three Phase | Less Motor | Belt Driven or Direct Motor Drive Less Motor | Direct Motor Drive With Three Phase Motor Price | H. P. | Speed | Wheel Only |
|-----|-------|----------|----------------------|----------------|---------------|---|---|-------|-------|---------------|
| 1/2 | 1/4 | 3450 | \$ 127.00* | \$ 119.00* | \$ 53.00 | 25 | \$174.00 | 2 | 1725 | \$ 60.00 |
| 1 | 1/4 | 3450 | 143.00* | 133.00* | 70.00 | 30 | 204.00 | 5 | 1725 | 72.00 |
| 2 | 1 1/2 | 3450 | 275.00 | 248.00 | 110.00 | 35 | 239.00 | 15 | 1725 | 84.00 |
| 3 | 1/2 | 1725 | 242.00 | 237.00 | 140.00 | 40 | 323.00 | 25 | 1725 | 113.00 |
| 3 | 3 | 3450 | 371.00 | 341.00 | 140.00 | 45 | 399.00 | 15 | 1140 | 140.00 |
| 4 | 2 | 1725 | 490.00 | 356.00 | 172.00 | 50 | 487.00 | 25 | 1140 | 170.00 |
| 4 | 7 1/2 | 3450 | 840.00 | 435.00 | 172.00 | 55 | 567.00 | 15 | 860 | 198.00 |
| 5 | 3 | 1725 | 660.00 | 392.00 | 213.00 | 60 | 704.00 | 25 | 860 | 246.00 |
| 5 | 10 | 3450 | 1,200.00 | 673.00 | 213.00 | 70 | 846.00 | 50 | 860 | 385.00 |
| 6 | 1 | 1140 | 530.00 | 418.00 | 250.00 | | | | | |
| 6 | 5 | 1725 | 814.00 | 616.00 | 250.00 | | | | | |
| 6 | 20 | 3450 | ..... | 798.00 | 250.00 | | | | | |
| 7 | 3 | 1140 | ..... | 605.00 | 352.00 | | | | | |
| 7 | 10 | 1725 | 1,205.00 | 757.00 | 352.00 | | | | | |
| 7 | 40 | 3450 | ..... | 1,210.00 | 352.00 | | | | | |
| 8 | 5 | 860 | ..... | 856.00 | 427.00 | | | | | |
| 8 | 7 1/2 | 1140 | ..... | 836.00 | 427.00 | | | | | |
| 8 | 20 | 1725 | ..... | 1,060.00 | 427.00 | | | | | |
| 8 | 50 | 3450 | ..... | 1600.00 | 427.00 | | | | | |
| 9 | 7 1/2 | 860 | ..... | 950.00 | 570.00 | | | | | |
| 9 | 15 | 1140 | ..... | 1,210.00 | 570.00 | | | | | |
| 10 | 15 | 860 | ..... | 1,670.00 | 904.00 | | | | | |
| 10 | 30 | 1140 | ..... | 2,013.00 | 904.00 | | | | | |

BLAST GATES, PAGE 67

| Size Inches | |
|----------------|---------|
| 2 | \$ 3.00 |
| 2 1/2 | 3.00 |
| 3 | 3.45 |
| 3 1/2 | 4.00 |
| 4 | 4.60 |
| 4 1/2 | 5.20 |
| 5 | 5.75 |
| 6 | 6.30 |
| 7 | 8.65 |
| 8 | 10.00 |
| 9 | 15.00 |
| 10 | 17.25 |
| 12 | 20.70 |
| 14 | 30.00 |
| 16 | 37.00 |
| 18 | 48.00 |
| 20 | 57.00 |
| 24 | 74.00 |

SUPER VENTILATING FANS, PAGE 69

| Size | H. P. | R. P. M. | Single Phase | Phase Three |
|------|-------|----------|-----------------|----------------|
| 12 | 1/12 | 1725 | \$ 61.00* | \$ |
| 12 | 1/12 | 1140 | 63.25* | ..... |
| 16 | 1/3 | 1725 | 76.00* | 91.00* |
| 16 | 1/8 | 1140 | 80.00* | 106.00* |
| 18 | 3/4 | 1725 | 135.00 | 140.00 |
| 18 | 1/4 | 1140 | 100.00* | 110.00* |
| 24 | 1 | 1140 | 200.00 | 200.00 |
| 24 | 1/3 | 860 | 230.00* | 247.00* |
| 30 | 1/2 | 860 | 320.00 | 230.00 |
| 30 | 1/3 | 690 | ..... | 260.00* |
| 36 | 1 1/2 | 690 | ..... | 450.00 |

AUTOMATIC SHUTTERS, PAGE 69

| Size | Price |
|------|---------|
| 12 | \$12.30 |
| 16 | 17.25 |
| 18 | 24.50 |
| 24 | 35.00 |
| 30 | 42.00 |
| 36 | 51.00 |
| 42 | 66.00 |
| 48 | 78.00 |

SPRAY BOOTH VENTILATING FANS, PAGE 70

| Size | H. P. | Single Phase | Three Phase | Less Motor |
|------|-------|-----------------|----------------|---------------|
| 18-A | 1/4 | \$ 97.00* | \$148.00* | \$ 80.00 |
| 18-B | 1/2 | 155.00 | 183.00 | 100.00 |
| 18-C | 3/4 | 176.00 | 209.00 | 120.00 |
| 24-A | 1 | 231.00 | 256.00 | 153.00 |
| 24-B | 1 1/2 | 338.00 | 282.00 | 180.00 |
| 24-C | 2 | 398.00 | 304.00 | 210.00 |

ATTIC FANS, PAGE 71

| Size | H. P. | 110V Single Phase | 220V Single Phase | Three Phase | Less Motor |
|------|-------|-------------------------|-------------------------|----------------|---------------|
| 30 | 1/6 | \$104.00* | \$106.00 | \$121.00* | \$74.00 |
| 36 | 1/4 | 128.00* | 134.00 | 150.00* | 93.00 |
| 42 | 1/3 | 168.00* | 174.00 | 221.00* | 136.00 |
| 48 | 1/2 | 248.00 | 248.00 | 248.00* | 172.00 |

Ball Bearing for Vertical Mounting—10% extra.

INDUSTRIAL VENTILATING FANS, PAGE 72

OPEN MOTORS

| Size | H. P. | Single Phase | Three Phase |
|------|-------|-----------------|----------------|
| 18 | 1/6 | \$101.00* | \$117.00* |
| 24 | 1/4 | 112.00* | 136.00* |
| 30 | 1/3 | 165.00* | 180.00* |
| 36 | 1/2 | 216.00 | 216.00 |
| 42 | 3/4 | 266.00 | 266.00 |
| 48 | 1 | 378.00 | 367.00 |

ENCLOSED MOTORS

| Single Phase | Three Phase |
|-----------------|----------------|
| \$108.00* | \$131.00* |
| 118.00* | 132.00* |
| 171.00* | 186.00* |
| 228.00 | 221.00 |
| 279.00 | 275.00 |
| 429.00 | 403.00 |

Above Equipped with Ball Bearings.

MINE FANS, PAGE 73

| Diameter Of Wheel | Price With Ball Bearings |
|-------------------------|-----------------------------------|
| 18 | \$106.00 |
| 24 | 121.00 |
| 30 | 139.00 |
| 36 | 171.00 |
| 42 | 242.00 |
| 48 | 259.00 |
| 54 | 339.00 |
| 60 | 451.00 |
| 72 | 572.00 |
| 84 | 671.00 |

* See page 5

ADDITIONAL EQUIPMENT FOR TYPE C, S, AND BC FANS

| No. | ADDITIONAL EQUIPMENT FOR TYPE C, S, AND BC FANS | | | | | | ACID RESISTING PAINT | |
|-----|---|-------------|-----------------------|---------------------------|-------------------|--------------------|----------------------|----------|
| | Inlet Guards | Belt Guards | * Volume Control Each | Water-Cooled Bearing Each | Heat Flinger Each | Flexible Couplings | Asphaltum | Heresite |
| 1 | \$ 5.00 | \$ 15.40 | \$ 17.60 | \$ | \$ 5.50 | \$ 6.60 | \$ 3.30 | \$ 3.30 |
| 1¼ | 7.15 | 15.40 | 22.00 | ..... | 5.50 | 6.60 | 3.85 | 3.85 |
| 1½ | 9.35 | 15.40 | 23.00 | ..... | 5.50 | 6.60 | 4.40 | 4.40 |
| 1¾ | 12.10 | 19.80 | 24.00 | ..... | 6.60 | 6.60 | 5.50 | 5.50 |
| 2 | 14.30 | 24.00 | 35.00 | ..... | 6.60 | 6.60 | 6.60 | 6.60 |
| 2½ | 16.50 | 33.00 | 40.00 | ..... | 6.60 | 18.70 | 7.70 | 7.70 |
| 3 | 21.00 | 35.00 | 53.00 | ..... | 6.60 | 26.40 | 8.80 | 8.80 |
| 3½ | 23.00 | 40.00 | 62.00 | ..... | 7.70 | 26.40 | 9.90 | 9.90 |
| 4 | 25.00 | 44.00 | 64.00 | 132.00 | 7.70 | 39.60 | 12.10 | 12.10 |
| 4½ | 27.50 | 53.00 | 67.00 | 132.00 | 8.80 | 39.60 | 13.20 | 13.20 |
| 5 | 35.00 | 57.00 | 70.00 | 132.00 | 11.00 | 39.60 | 15.40 | 15.40 |
| 5½ | 40.00 | 70.00 | 77.00 | 147.00 | 11.00 | 39.60 | 19.80 | 19.80 |
| 6 | 48.00 | 73.00 | 83.00 | 152.00 | 13.20 | 52.80 | 19.80 | 19.80 |
| 6½ | 55.00 | 82.50 | 88.00 | 176.00 | 13.20 | 52.80 | 22.00 | 22.00 |
| 7 | 60.00 | 88.00 | 95.00 | 211.00 | 26.40 | 79.20 | 26.40 | 26.40 |
| 8 | 66.00 | 95.00 | 106.00 | 229.00 | 33.00 | 79.20 | 30.80 | 30.80 |
| 9 | 75.00 | 106.00 | 124.00 | ..... | 33.00 | 165.00 | 39.60 | 39.60 |
| 10 | 83.00 | 119.00 | 141.00 | ..... | 46.20 | 165.00 | 44.00 | 44.00 |

ACCESS DOORS—(All Steel Case Fans) \$13.20 per square foot.

DRAIN COCK—½"—\$2.20 1"—\$4.40

* DOUBLE WIDTH—Double above prices for either two inlets or double outlets.

SPLIT HOUSING (Type S & BC) +5%

SEPARATE BEARING PEDESTAL +5%

CLASS II CONSTRUCTION (Type S & BC) +10%

CLASS III & IV CONSTRUCTION (Type S & BC) +20%

